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Why Bother With a Gaff?

By BUTLER WHITING

The leg of mutton is an old American rig, for New Haven sharpies, Chesapeake Bay bugeyes and the old time Block Island boats all carried it. Lately the Scandinavians have adopted what our British cousins call the "Marconi rig," but we prefer the original American name

WHEN Commodore J. B. Ford asked me to sail his new Larchmont O boat *Varuna*, which was to have an improved leg of mutton or "Marconi" rig, I was very pleased at the opportunity to make the experiment and confident of its success. As a matter of record, the rig is now established, the *Varuna* having won the unofficial championship of her class three years running, against four boats with gaff rigs, and five or more Marblehead skippers have converted their gaff rigs into leg of muttons with gratifying results.

A talk with my brother, an aviator and small boat sailor, made me sure it would be successful when he explained that in the case of a flying machine the plane which was 6 x 30 would not go as fast as a plane 3 x 60. This being true, it becomes apparent why the development of sails in the last ten years has been along these lines. When you consider that the *Constitution's* sail area if triangulated would look like Fig. 1, while one of the N. Y. Y. C. 40-foot rigs would be narrower, and noting also the lofty triangular shape of the "Marconi" rig, it is easy to see how the higher and narrower leg of mutton rig would be the faster.

The *Varuna's* mast is over 75 feet long, having a bow of 18 inches, and is set with a rake aft of 18 inches, so that the head of the mast is 3 feet abaft its base. Pigeon made it and sent it to the railroad to be shipped, but when the station agent saw it he sent it right straight back and would not receive it. He had handled many hollow masts and he knew that this one was imperfect. It was warped!

But in the end he did take it and when I first saw it, on two horses behind Frank Wood's boat shop at City Island, I must confess that my feelings were somewhat similar to those of the station agent. That mast was so limber that I could wobble the head three feet up and down with my little finger. This caused a wave to run along the entire mast, so you can understand why I was a little nervous the first time we got under way, especially when I tell you that the runners did not go to the masthead, but only to the second set of spreaders, which are twenty feet or more below. Besides those runners, which had V leads, there were six side stays of various lengths and diameters, a jib stay and a forward masthead stay, to say nothing of William Gardner's "Halyard strut

Mr. Whiting sailed the cat Minnetonka *in 1897 8. The next year he won 21 firs's out of 22 starts, with the cat* Kazaza. *He was one of the crew of the* Joyette, *when she won the Taft Cup in 1905 and sailed on the* Joyant, Michigago, Josephine *and* Nahma *in the hard fought races for the Manhasset Bay Cup. He has sailed on the* Shimna *in an Astor Cup race and has skippered N. Y. Y. C. Thirties, Raceabouts and Sound Schooners.—Editor.*

M. Rosenfeld, N. Y.

Varuna, with her leg of mutton rig. Notice the bow in her mast and the long luff of the mainsail. Of late years the trend in racing yachts has been toward a high, narrow sail plan. The leg of mutton mainsail is the logical development

stay," all of which had to be stretched. Fortunately we had a nice light breeze and we had a little brush with a N. Y. Y. C. 40, in which we walked from her lee beam to her weather bow, that made us forget the new rigging.

You probably think you would not have such a rig on your boat, but when you go to coil down the gear and find only two halyards, a mainsail halyard and jib halyard, when

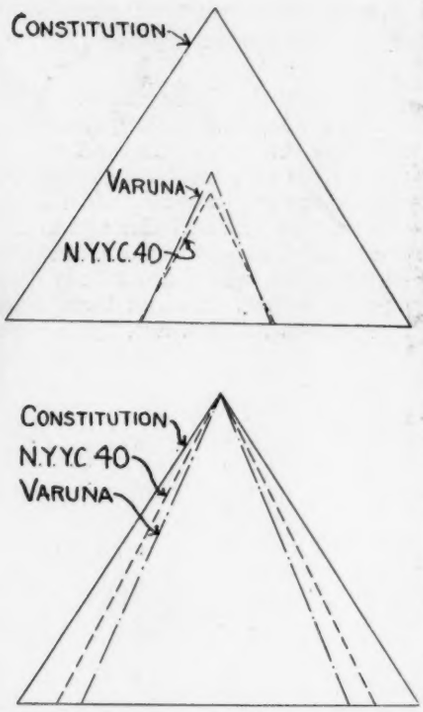


Figure 1. The upper diagram shows the sail plans of the three yachts, as triangles, on the same scale. In the lower one they are all plotted on the same hoist

you have hoisted the sail and find the gaff, peak blocks and throat halyards and their weight (some 300 pounds, mostly aloft) dispensed with and when you lower away and only have one halyard to get foul, only two parts of rope on the after side of your mast, and when you find that, owing to William Gardner's ingenuity, the slides never jam in the track—then, good old gaff mainsail man, you can change your mind and say: "Well, she goes up and down nicely. Now, what will she do under way?"

In a breeze, you note, she balances, which means that her rudder isn't dragging at a great angle. The gaff rig O-Class skippers used to come ashore after a hard race and complain of sore arm muscles, while only in two races during three years did I have to use two hands. The *Varuna's* tiller pulls considerably less than that of a New York thirty.

As for pointing, she simply climbs out across the others, and can't you just imagine the confidence produced and the satisfaction given when, side by side with a gaff rig, you know you can outpoint her and that you are not dragging your rudder across you as much as the other boat, especially if the gaff rig skipper has told you the leg of mutton rig is no good.

In a heavy sea to windward it excels, but care must be exercised not to trim the mainsail too flat. The point at which further trimming hurts is when the boom ceases to come inboard any more but starts to come down; then the leach begins to tighten and, as there is no give aloft such as the swing of a gaff, it curls to windward and bags the sail.

When the rig is developed so that a sail with very little draught is used, the traveler dispensed with, and a slab reef arranged, the point at which to stop trimming will change. I believe that the rig will then sail even closer to the wind and still keep going. In this connection study the flying machine, note the section of its wing and note that the back end curves *up*. In a sail this would mean that the leach must ease or fall off a little.

In very light weather, when the boom hangs a dead weight on the sail, allowing no draught, the gaff rig seems to do better because the gaff in swinging sideways acts as a recoil spring and gives the sail some play, while the leg of mutton has only a rigidly stayed mast with nothing to soften the wave motion. However, in such weather luck always predominates or the race is called off—so a licking does not hurt.

On the other hand, in a hard breeze, so hard that the leg of mutton boat has to "lug" her sail—and this means that the gaff rig has been lugging hers for some time due to the extra weight aloft—then the gaff can beat the "Marconi" because the "Marconi" in luffing has reduced her sail's driving edge along the whole hoist, while the gaff sail is lengthening its driving edge and becomes a narrow sail due to the forward part being aback.

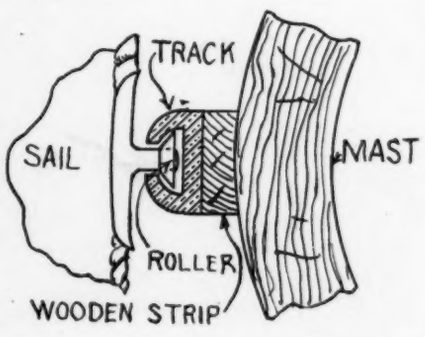


Figure 2. The track and sliders of the mainsail. The sail is drawn as if horizontal to show the construction of the slider

Reaching is about an even thing, with a shade of advantage to the gaff rig, but running is the discouraging leg, for in light weather the boom hangs heavy and the lazy jacks cannot help much because the arc of the

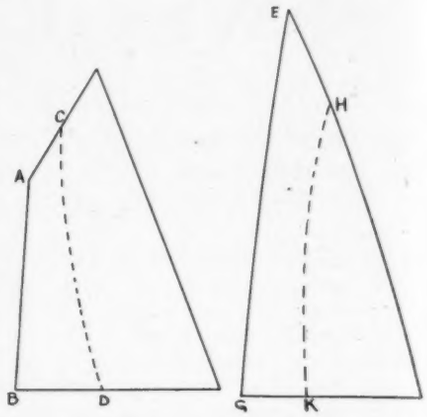


Figure 3. When the gaff sail is partly aback, its driving edge lengthens from A B to C D, while the leg of mutton's driving edge shortens from E G to H K

roach is so great that the moment the jacks are tightened the leach falls inboard and curls off, making a tight ridge along the inboard end of the battens. In a hard breeze, without a gaff to swing forward, the leach bellies out and so shortens itself, always lifting the boom end up even to pigeon winging. This stunt I did one day due to my haste in jibing with the crew taking the spinnaker in, leaving only one man on the main sheet. If the slack of the sheet had been taken in it would have kept the boom down, but it was blowing too hard, so over came the boom! The head of the sail was still full of wind on the old course and—split went the mainsail from leach to mast! This boom riding is the worst element of the rig.

I never experienced a thunder squall with *Varuna* but have had her down to the cabin house with everything slapping and the mast imitating the rubber topmast of the *Gardenia*. Nothing parted, but battens were broken and this happens even with gaff rigs, so I am satisfied that, for Sound sailing, at least, the leg of mutton is the best rig.

I hear that they are turning out some extremely high and narrow rigs for Boston waters to be used this year. Of course, this is the only way to find the right proportions, but I am afraid that such extremes will bring the disfavor of the measuring yachtsmen, who will talk of "danger" and "freaks" and handicap the rig even more with legislation. As it is now, the club topsail rig cheats the leg of mutton because the rule allows

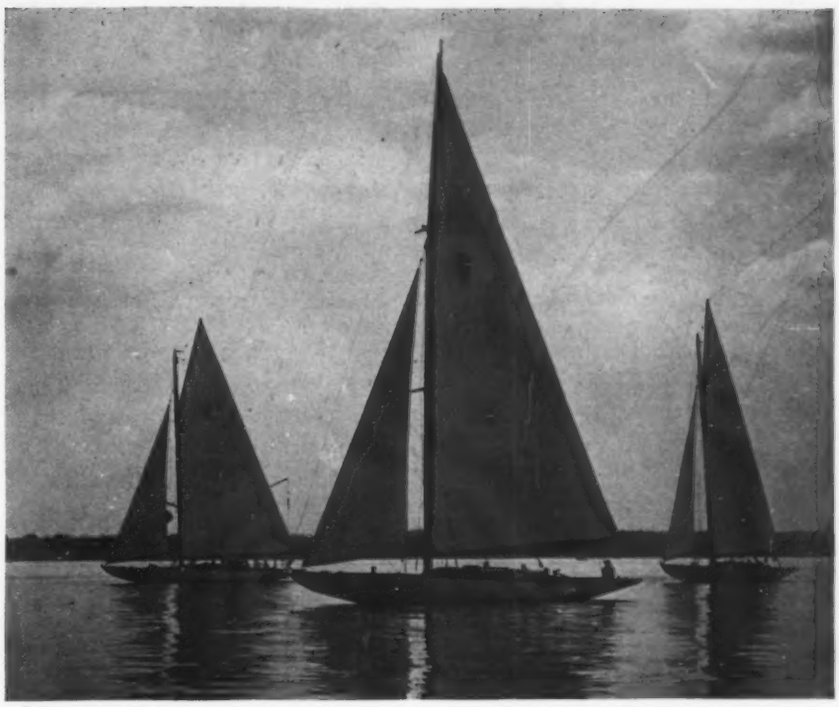
free the distance the sprit extends above the truck, and the distance the club extends beyond the gaff end.

The 90-footer *Independence* had a club topsail sprit which extended 22 feet above her truck, and the present rule allowed her this sail free of measurement, or 922 square feet more than her working topsail. This is about as much sail as a N. Y. Y. C. 30 carries and the Marconi would be penalized just about that much in a 90-foot class.

To develop the leg of mutton into a big boat rig, the actual sail area should be measured and the rule on club topsails should be changed.

Just think of the advantage of the rig on big boats in these days of scarce and expensive crews.

As to height, Herreshoff in 1901 was able to keep a stick 146 feet above the deck in the *Constitution*, which held in place a great gaff, two club topsail spars, to say nothing of the halyards and blocks and the concentrated pressure of the gaff jaws. If the "Wizard of Bristol" could do this so long ago, who knows to what limits the leg of mutton rig may be successfully carried?



M. Rosenfeld, N. Y.

This shows the double spreaders and the lead of the shrouds. It also shows how high and narrow Varuna's sail plan is as compared to other boats of her class

Cruising Days

By ALBERT STUART MYERS

COMRADES of the Pourquoi Pas, we've met again to-night
To eat another seaman's meal beneath the cabin light.
Imagine that we're gathered on the good ship staunch and able.
And sitting down again to mess around the cabin table.

It's good to meet old friends again, old shipmates tried and true;
To live once more those summer days when summer skies were blue.
Let's throw our troubles overboard and all the cares that canker
And feel like any happy crew that's swinging to an anchor.

We've sailed through many a pleasant day aboard that good old yawl,
We've felt the sting of flying spray and heard the sea birds call,
Or drifted on a quiet tide without a sign of motion
Above our heads a lazy sky; beneath, a lazy ocean.

We've felt the joy of howling blows when all the deck is under,
We've sat within a cabin snug and listened to the thunder,
We've stood upon a heeling deck with good salt water flying
Or, anchored in some quiet spot, we've watched the sunset dying.

So here's a health to cruising mates—good luck to one and all,
Soon may the summer days come 'round when salt sea breezes call.
When, in the comradeship of friends and loyal mates together,
We'll taste the joy of cruising days through every kind of weather.

The Study of Form

By A. CARY SMITH

While cleaning house recently, we found the manuscript of this article, tucked away and forgotten

ABOUT 1893 the writer was commissioned to design a schooner, the *Elsemarie*. She was to be 70 feet load water line, of not very great draught and was not to have the long overhang forward that was then growing in favor. The *Katrina* was considered the most beautiful boat of the day and the length of her figurehead was to be the length of the forward overhang of the new boat.

Elsemarie, as the new craft was named, was built at Nyack, the home of the old schooner *Tidal Wave* and of many other specimens of rule of thumb naval architecture, and it was hard to convince the sturdy artisans that there had been any advance since then. When she was ready to leave the dock the builder confided to the designer that he did not like to criticise, but how was a boat to go to windward without a forefoot? It is unnecessary to add that all of the former "shay douvers" had forefeet. The designer mildly suggested that a boat held on to windward with her centerboard. Fortunately the builder and his foreman came down on the boat to Staten Island and were convinced, when they saw how she worked and went through the water, that for some reason that did not suggest itself to their minds a boat could go to windward without a forefoot.

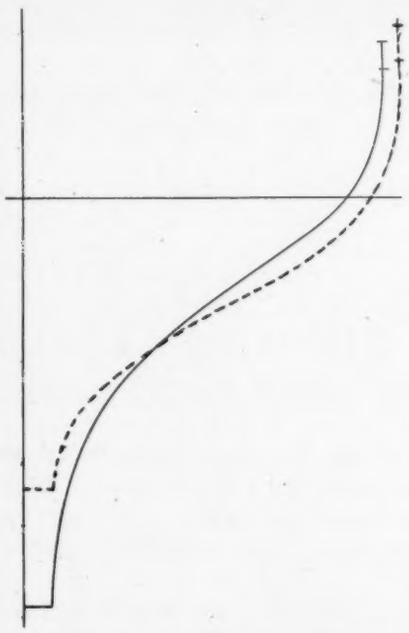
The writer had built a cat boat in 1860 that drew about five inches forward and had then demonstrated that same fact to Doubting Thomases by going to windward in a way that no other cat, even one with a forefoot, could do.

The *Elsemarie* had a sail plan that excited the curiosity of the rocking chair fleet at Larchmont and the critics loudly exclaimed that she would never carry that mainsail. Its area was 6,383 square feet. She did carry it and won a number of races and by so doing excited the wrath of boat owners whose fliers were beaten.

The boats that were outclassed had friends on board who had a pull with the daily papers and, in an insinuating way, it was suggested that *Elsemarie* was not in her proper class, hence the reason for her victories. This was carried so far that intimate friends of the owner had their suspicions that all was not right and, with the brutal frankness of close friends, questioned him as to what was the trouble if it was not petit larceny. The truth is that the measurement rule was taken advantage of.

In strong winds she won from the *Iroquois* and proved herself a good sailer under all conditions, and in smooth water she could hold the *Ariel*, then in the prime of her youth. She could also hold her in moderate winds with the wind abeam.

Shortly after she came out, the *Amorita* was designed by the writer with only one condition, that she was to be 70 feet water line. Her forward overhang was 13 feet and her after overhang 18.3, with a beam of 20 feet and a draught of 12 feet. The displacement of the two boats was about the same when in racing shape, roughly 83 long tons. *Amorita's* sail area was a trifle more than the older boats being, with club topsail and baby, 6,943 square feet.



The dotted line is Elsemarie, the full line Amorita. Elmina is almost identical with the latter. Mr. Smith used to pat the model of Elmina and say: "Now here is a boat that's contrary to all the principles of naval architecture—but she seems to go!"

The first time the *Amorita* sailed was in a race at Larchmont. When she got under weigh about 20 minutes before the start, it was her first trial. It rained all day and the wet kept her sails in shape and she won with ease, beating *Elsemarie* and *Emerald*.

After that she defeated *Elsemarie* in 14 races. One day, coming from West Chop in the Vinyard, by skillful work at the start the *Elsemarie* had spun out a good lead. But when she began to feel the sea, just a long roll that made *Elsemarie* dig into it and throw a bow wave, the *Amorita* came up to leeward. It had been predicted that when *Amorita* got in a sea, her long snoot would pound, but she went across the *Elsie's* bow without a splash, she seemed to shoot over the sea and not go down perceptibly. From the Sow and Pigs Lightship to Newport, she beat *Elsemarie* 11 minutes! *Colonia*, 90 feet L. W. L., had newly been rigged as a schooner and only beat *Amorita* one minute on that day. When *Colonia* pitched, she nearly touched her bowsprit to the water.

It was a wonderful exposition of a narrow sharp boat in a seaway. An inspection of the midship sections of the boats will be illuminating.

The conception of the model was to have a small boat in light weather and a big one when it blew hard, and the designer thought over some of his early experiences.

There was a sandbag boat, called the *Susie S*, that defeated all the other 26 foot boats. She had very little bilge and the hull would be depressed from the weight to windward and, with the wind abeam, would go like a dart when wide boats with strong bilges would roll out and "come up and look at you."

The bilge of the *Amorita* was pared off and the displacement put down near the keel. When she was tried, it was found that she did not heel much in a blow but went bodily under water and carried her sail in a marvellous manner, like the old *Susie S*.

One tussle the *Elsemarie* had with *Amorita* was down the Sound on the N. Y. Y. C. Cruise run from Glen Cove to New London. The wind was abaft the beam and very strong. Two men were sweating at the wheel on the *Elsie;* all the sail that could be set was carried. Every now and then a blast would come and, with the rail under, she would nearly "come to." Off to leeward was the *Amorita*. One man at the wheel steered her like threading a needle; the main boom would strike the water and the spray would fly like a fountain; the writer was told afterward that the lee

quarter was covered with foam every time she took the puffs. At last the small staysail was taken in and the big one went slowly up to the main topmast head and foremast head. The staysail was made of German linen that cost as much as a' 'smart hat" and came down within about four feet of the deck and could be used for a foresail in a pinch. It broke out like a gun, the sheet was hauled down and away she went, leaving the *Elsie* far astern.

The experience gained from these two boats, both of the same water line, length and displacement, (within a ton or so) and with very nearly the same sail area, (560 square feet difference,) shows what a difference is made in performance where there is enough depth to make a proper form.

The low weight and the slack bilge makes the boat settle when heeled over and at the same time she will go just as fast when smothered up! The *Amorita* was run from Hempstead mark to Larchmont, *with the water up to the house*, in 15 minutes.

The reason is that she gets down on a long flat bilge diagonal. In the race alluded to, *Amorita* won from *Colonia*. The latter boat does not like to be heeled to the skylight though a club topsail has been carried at this angle for the reason that no one liked to give the order to take it in!

To windward, blow hard, *Amorita* could make a show of *Elsemarie* or any other boat of that day. Before the wind, the same. Beam wind, the same. With a rolling sea and light wind there was no comparison. Under the latter condition the *Amorita* beat the *Ariel*, about 10 feet longer, in a race from New Bedford to Newport by 30 minutes. And in a bad sea, at Bar Harbor, she won from *Emerald* and *Colonia*, the latter more than 15 feet longer on the water line. One of the boats only beat her a few seconds, boat for boat, and when Charlie Barr was questioned about it he showed his innate honesty by saying: "She went very fast, that's all."

The midship section of *Amorita* is the most stable section known. This is the Cary Smith slack bilge, ridiculed by all naval architects.

At a race at Larchmont, when the wind blew from 35 to 40 miles an hour, the *Elmina* (whose cross section is exactly like that of *Amorita*) carried both topsails and the baby and just put the top of her rail in the water when one of the large yachts in the race nearly showed her keel. The other big schooner, without any light sails set, was all under water. And yet Dixon Kemp tells us with an *ex cathedra* air, "there is no stability in a cross section *per se*!"

As a great genius in machinery, when lecturing before engineers, told of what could be done, there was a chorus of "that is not possible." He smiled and said: "Gentlemen, I have done it."

And in disturbed water this section is unequalled.

They'll Race Off New York in July

By GILES MILBY

THOUGH no official announcement has yet been made by the Cup Committee of the New York Yacht Club, enough has been told unofficially to warrant the statement that the first race for the America's Cup will be held on Thursday, July 15th, and the course will be the old one off New York, starting from Ambrose Lightship. The second race is scheduled for Saturday, July 17th, and the third for Tuesday, July 20th. The series will be the best three out of five races, and if more than three races are necessary they will be sailed on the following Thursday, Saturday, Tuesday and so on. Weather conditions, to be sure, may cause failures and postponements, though this is not as likely as when the races are sailed in the fall. The prevailing winds off the Hook in July are southerly; they are frequently of considerable strength so that fast time may be made during the series.

The negotiations between the challenger and the New York Yacht Club have been mainly over the course and the date of the races. Sir Thomas Lipton suggested June 24th for the opening of the series but the Club Committee contended that June would be too early. There has been so little yachting during the war that it would take time to train the crews and it would be impracticable to start the trial races for the defending yachts before May. The Club's position in this matter was made clear to the committee of the Royal Ulster Club and July 15th was named as the earliest date which would be agreeable to the defending organization. The challenging club agreed to this and the date was selected for the first race.

A course off Newport was suggested by the New York Yacht Club. It is said that the winds are better there and there would be less interference with the racing yachts by the accompanying fleet of excursion boats but, as we pointed out last month, there were disadvantages for the challenger in the Newport course and the Yacht Club yielded to Sir Thomas Lipton's desire to sail the race off New York.

A change in the measurement rules was suggested by the Royal Ulster Club and a long technical letter, apparently written by Mr. Nicholson, designer of *Shamrock IV*, was read at the January meeting. The New York Yacht Club, however, declined to accede to this request and, very properly, refused to make any change in the measurement rule. Their position is that the challenge was made and the yachts built under an established rule; even though the race is not to be sailed until six years after the challenge was sent, it is now no time to alter the measurement rule in any respect. It is possible that some changes will be made in *Shamrock IV* that will reduce her rating; as she is at present she would have to allow considerable time to *Resolute*.

The courses will be 30 miles in length and will alternate between a windward and leeward race and an equilateral triangle, ten miles to the side and one leg to windward. If possible, the first race will be over the windward and leeward course. If a race is not finished it will be sailed on the next scheduled race day over the course originally laid out for it.

The start will be at 11 A. M. each day and the time limit will be six hours. If the leader does not finish within that time the race will be resailed. Postponements will be at the discretion of the Regatta Committee and the rules as to disqualification, protests, measurement and so on remain the same as in previous races.

Shamrock IV was named as the challenging yacht, but the New York Yacht Club Committee reserves the right to wait until a week before the first race, before naming the defending yacht. Either *Resolute* or *Vanitie*, therefore, may be chosen as the defender.

We expect to see all three of the big sloops under canvas early in the season, for the trial races of the defenders will start in May and the green sloop will also begin her tuning up about that time. We are told that the 23-meter *Shamrock* will

leave England next month. She is now at the Nicholson yard in Gosport, England, and will probably be towed across the Atlantic via the Azores and Bermuda. This *Shamrock* was built for English racing and is a trifle longer than *Shamrock IV*.

Resolute is at the Herreshoff yard in Bristol and is, we are told, in excellent condition in spite of her long lay up. She will be steered by Charles Francis Adams, 2nd, who handled her with such skill in 1914. Robert W. Emmons, 2nd, remains her managing owner and Captain Christensen will again be sailing master. A. S. Cochran, owner of *Vanitie*, has placed her in the hands of the Cup Committee. George Nichols, one of *Resolute's* afterguard in 1914, is to have charge of her though a helmsman has not been chosen. She, like *Shamrock IV*, will be fitted out at the yard of Robert Jacob at City Island.

The high wages paid for seamen have taken most of the professional yacht sailors out of the game and the task of selecting good men to supply the beef on sheets and halyards will not be easy. The old gang is pretty well scattered, though some of them will be glad to drop everything and come back for the season of yacht racing. We have known of men who have left good positions ashore to answer the lure of a cup contest.

The members of the Cup Committee of the New York Yacht Club which threshed out the challenge are: Lewis Cass Ledyard, Chairman; Edward D. Morgan, C. Oliver Iselin, W. B. Duncan, C. Ledyard Blair, Dallas B. Pratt and Grenville Kane.

J. P. Morgan, as Commodore of the club, would have been the chairman of the committee were he not one of the owners of *Resolute*.

Miami's Racing Schedule

AN attractive programme of motor boat races to be held at Miami has been planned by the local regatta committee, of which Carl G. Fisher is chairman.

There will be a racing event every week this season, beginning February 14.

It has been decided by the committee to run the races between Miami and Key West and the Gun Key and Palm Beach races prior to the races in the bay. It will be remembered that just before the war the Chamber of Commerce at Key West bought some handsome trophies for the race between Miami and Key West. Because of the war these races were called off, as were also the Gun Key and Palm Beach races. These races will be known as the "express cruiser championship of the United States," and this class of racing will continue with unchanging rules for three years.

The express cruiser long distance races will be as follows:

To Bimini and return, approximately 100 miles, February 14.

To Palm Beach and return, approximately 130 miles, February 21.

To Key West, one way, approximately 160 miles, February 28.

A 10-mile express cruiser race on the bay course, March 5.

A twenty-mile express cruiser race on the bay course, March 6.

The scoring will be as follows:

1 point for each boat defeated. 1 point for starting in the 10-mile race. 2 points for the 20-mile race. 3 points for Bimini and return. 4 points for Palm Beach and return. 5 points for Key West.

The greatest number of starters in any race of any class will be the basis for figuring the points won in all races. For instance, if in the 10-mile race there were 4 starters, the scoring would be, 4 points for first, 3 points for second, 2 points for third, and 1 point for fourth. In the Key West race the scoring in case of four starters would be, 20 points for first, 15 points for second, 10 points for third, and five points for fourth.

Mr. Fisher said recently, concerning these long distance express cruiser races:

"We have at this time the largest field of express cruisers ever gotten together in the United States—at least eight fast boats are here in the harbor now. Some of the boats that will probably be entered in these races are more suitable for light weather, and to make a general all-round race for the displacement boats that will cover the racing conditions for express cruisers, the point system will be used covering all events.

"The system of scoring will be as follows: It will be necessary for any boat entered to finish one of the long distance outside races in order to compete in the final races in the bay. The committee have decided on these rules in order that the lightly constructed and very powerful boats, such as the *Shadow V*, and the Gar Wood boat—which we understand will be entered here and is very fast—will not have an undue advantage over heavier boats of somewhat larger size.

"The long distance races will start promptly at nine o'clock from the Biscayne Bay Yacht Club dock, as usual, so that citizens of Miami can assemble and see the race off. The finish of the long distance races will be the bay line of the government, where it will be possible for three boats to come in abreast, if the finish should be that close. It was thought best not to try to finish in front of the yacht club, where so many boats are lying in the harbor.

"It is estimated that it will take about four hours to run the race to Gun Key light and return. On account of customs, delays, etc., the boats will not enter or discharge passengers at the Bimini harbor, but will pass around a buoy at the entrance to the harbor and back to Miami.

"These races will allow all classes of heavy express cruisers to enter—and by entering the outside races, the larger, heavier express cruisers will have an opportunity of winning the events even though they should lose the inside races. The system of scoring will even matters up so that the best boat under all conditions must win."

The program for the bay races is as follows:

On Friday, March 5, at 2:00 p. m., 20-mile open displacement boat race. Open to all open displacement boats with an average speed of better than 20 miles per hour. Flying start. No handicap.

2:50 p. m., 10-mile race for express cruisers. Open to all express cruisers with an average speed of better than 20 miles per hour. Flying start. No handicap.

3:20 p. m., two-mile time trials. One lap of race course—open to all entrants.

4:00 p. m., aquaplane events. In addition to a crack-the-whip contest for prizes, an exhibition of fancy riding will be given.

On Saturday, March 6, at 2:00 p. m., 10-mile open displacement boat race. Open to all open displacement boats with an average speed of better than 20 miles per hour. Flying start. No handicap.

2:30 p. m., 20-mile race for express cruisers. Open to all express cruisers with an average speed of better than 20 miles per hour. Flying start. No handicap.

3:20 p. m., two-mile time trials. One lap of race course—open to all entrants.

4:00 p. m., aquaplane events. In addition to a crack-the-whip contest for prizes, an exhibition of fancy riding will be given.

Sims—The Fighting Sailor

By HENRY C. AMES

WILLIAM SOWDEN SIMS is one of the most aggressive rebels and efficient commanders that ever adorned the Navy Register. He has ever been impatient of conventional methods and red tape. Even at the Naval Academy he devoted his best efforts on the courses that directly concerned his profession, neglecting certain academic studies. His quickness of mind made it easy for him to go through the difficult course of studies and he graduated thirty-third in a class of sixty-two, though he stood near the top in seamanship, gunnery and naval tactics.

Most of the present ranking officers of the Navy have served at one time or another on the old *Tennessee*, the flagship of the North Atlantic Squadron in the Eighties. She was a noble ship in appearance, with spacious decks and an imposing array of smooth bore guns. Far aft in royal state, in quarters to which few but his satellites and servants ever penetrated, lived the admiral, whose appearance on deck always created a stir in his kingdom. In almost equal grandeur dwelt the captain, and the senior officers occupied a spacious wardroom. Midshipmen, cadet engineers and other junior officers, of whom there were usually thirty or more aboard, were packed into two noisome dens on the berth deck, lighted by guttering candles and ventilated by a few small air ports that could be opened only when the ship was in dry dock. The steerage, as it is called, was always crowded, for when the Navy Department had no particular duty for a junior officer to perform they ordered him to the *Tennessee*. She was usually convenient and the youngster sent to her could not collect much milage.

Shortly after his graduation from the Naval Academy, Sims was ordered to the *Tennessee*. She was fitting out for a cruise and the admiral had laid in a large stock of supplies for his table. Lacking sufficient storage space, he appropriated the junior officers' bathroom and filled it full of potatoes. Great was the consternation among the junior officers and an indignation meeting was held in the steerage. A committee was appointed to wait upon the Admiral and present the case diplomatically. Sims was made chairman.

After due formalities, the committee was ushered into the august presence and the chairman began with the statement that he and his fellow officers considered their bath tub was as important as the admiral's potatoes and suggested that some other storage space be found. Such unheard of audacity was a shock to the flag officer and he prepared to crush the committee, beginning his reply with the time honored formula: "Well, young gentlemen, when I was a midshipman . . ." Much to the consternation of his fellow committeemen, Sims interrupted with the remark, "Well, admiral, I have no means of knowing what you were when you were a midshipman, but *I* am a gentleman and accustomed to bathe." When the smoke cleared away the admiral surrendered and his potatoes were stowed somewhere else.

To Sims getting the job in hand done was the important matter, traditional methods and customs of the "Old Navy" seldom bothered him if they stood in the way of efficient work. One day on the *Tennessee* he was officer of the forecastle and superintending the hoisting of oil barrels from a lighter alongside by the usual yard and stay tackles. The officer of the deck, a gray haired lieutenant, strolled forward to see how the young man was getting on and was not pleased with what he found.

"How is this, Mr. Sims," said he "you are hoisting in heavy weights without having them buoyed as the regulations prescribe. Suppose your tackle parted and the barrels went overboard?"

"But, sir," said the midshipman, "they would float."

"Nonsense," replied the lieutenant, "they are much too heavy" and an argument ensued, Sims finally rushing below and bringing up a wine glass into which he poured water and then oil.

"You see sir," he said, "the oil floats and a barrel of oil will certainly float."

(Continued on page 84)

Underwood & Underwood

Vice Admiral William Sowden Sims, rebel, reformer and "first-class fightin' man."

Galleys of the Sixteenth Century

PART III - *Continued*

THE *Royal Galley*, Don John's flagship, was built in Barcelona by the viceroy of Catalonia in 1568, so that she was three years old at the time of Lepanto. She had a very lofty poop, even for that time, and the timber of which she was constructed was Catalonia pine, light but strong. Superbly decorated within and without, she had paintings representing the story of Jason, the ship *Argo* and the Golden Fleece, and allegorical figures emblematical of the qualities proper to a naval commander, illustrated by Latin mottoes emblazoned in letters of gold. Some of them were as follows:

Neptune—*Curet componere fluctus.*

Dolphins and tortoises—*Festina lente.*

Elephant and rhinoceros, whetting their tusks and horn—*In utrumque paratus.*

The effigies of twelve illustrious sea captains formed part of the decoration, six ancients on the right and six moderns on the left; on the right, Minos, Jason, Themistocles, Caius Duilius, Pompey the Great, and Augustus Cæsar; on the left, Roger of Sicily, Roger di Loria, Jayme the Conqueror, King of Aragon, Alphonso of Aragon and Sicily, Andrea Doria, and the Emperor Charles the Fifth. The decorations were by a very celebrated sculptor and painter of the day, Juan Bautista Vasquez.

When Don John left Messina with his fleet to proceed to look for the Turks and give them battle, he issued general instructions which referred not only to the order of sailing but applied to its conduct in case of the sudden appearance of the enemy.

The vanguard was to consist of light, swift galleys, under the orders of the general of the Sicilian squadron or division. These were to keep about three leagues ahead of the main body and to fall back upon it if the enemy were discovered. The main body or line of battle was composed of three divisions.

The first, forming the right wing, of fifty-four galleys, was commanded by Giovanni Andrea Doria, and his flagship was distinguished by a broad green pennant at the peak of the main yard (*en la pena*). The other vessels of his division showed smaller green pennants in the same place.

The centre, under Don John himself, consisted of sixty-four galleys and had blue pennants at the mastheads (*en las calces*).

The left, of fifty-three galleys, under Berberigo, had yellow banderoles on the fore yards (*en las astas*), except the leader, who had his yellow flag flying at the peak of the main yard.

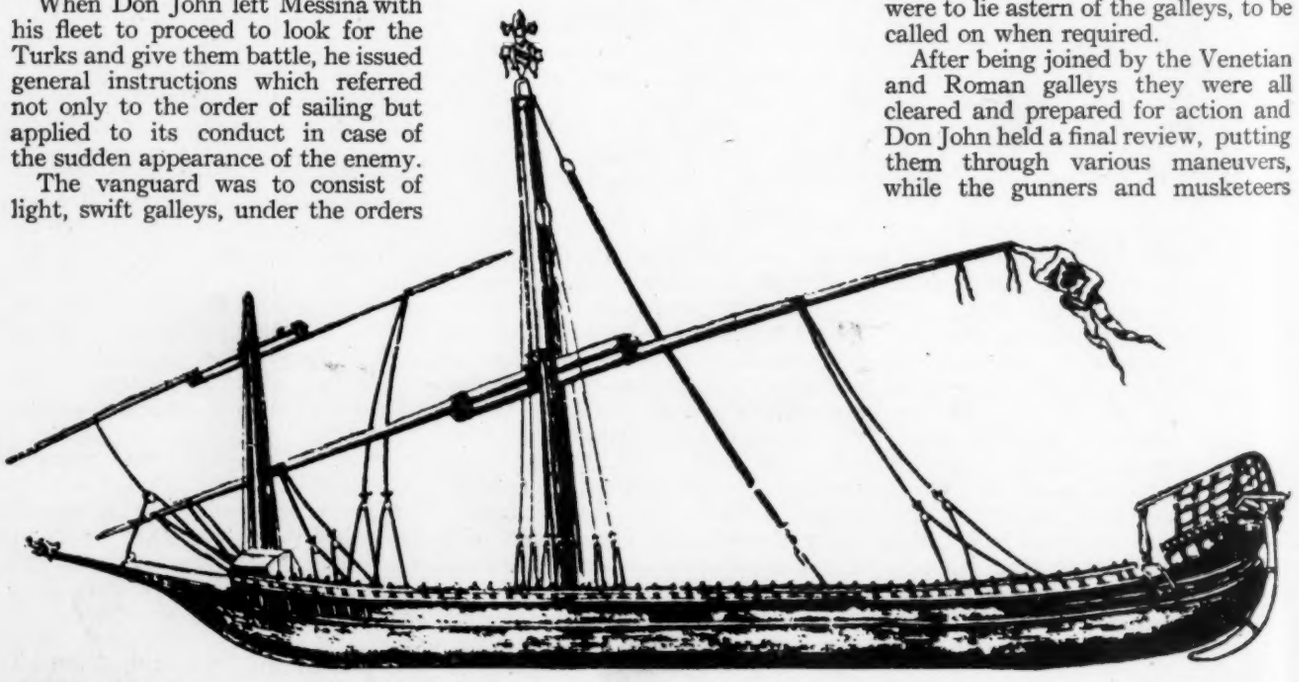
The rear guard or reserve, of thirty galleys, under the Marquis of Santa Cruz, did yeoman service in the subsequent battle and carried white pennants from a flagstaff over the stern lantern, the marquis carrying his own at the peak of the main yard.

The six galleasses which did such good work at the opening of the action of Lepanto were to sail in pairs and to be distributed among the three divisions of the line; the galleys to take in turn the duty of towing them when that was necessary.

Especial orders are contained in the instructions in regard to quiet and discipline and in regard to husbanding the supply of water, which was small for the number on board such vessels. In case of an action, the commanders of galleys were to take such distance as to keep the oars of one from interfering with those of their next in line but they were also to be always near enough to keep the enemy from cutting through by a dash. The spaces between each division were not to exceed four or five galley lengths. Upon the signal for battle they were to draw up in exact order and the commander of each division was to use his frigates in seeing to the correctness of the alignment. Artillery fire was not to be used at too great a distance and at least two guns were to be reserved, loaded, until coming to close quarters.

The great naves were not included in any division but were to damage the enemy when and how they could. If the wind prevented their getting into action, they were to lower their boats and send musketeers to aid the galleys. The frigates, each armed with two esmerils (a piece somewhat larger than a falconet or field-piece) and having on board ten musketeers, were to lie astern of the galleys, to be called on when required.

After being joined by the Venetian and Roman galleys they were all cleared and prepared for action and Don John held a final review, putting them through various maneuvers, while the gunners and musketeers



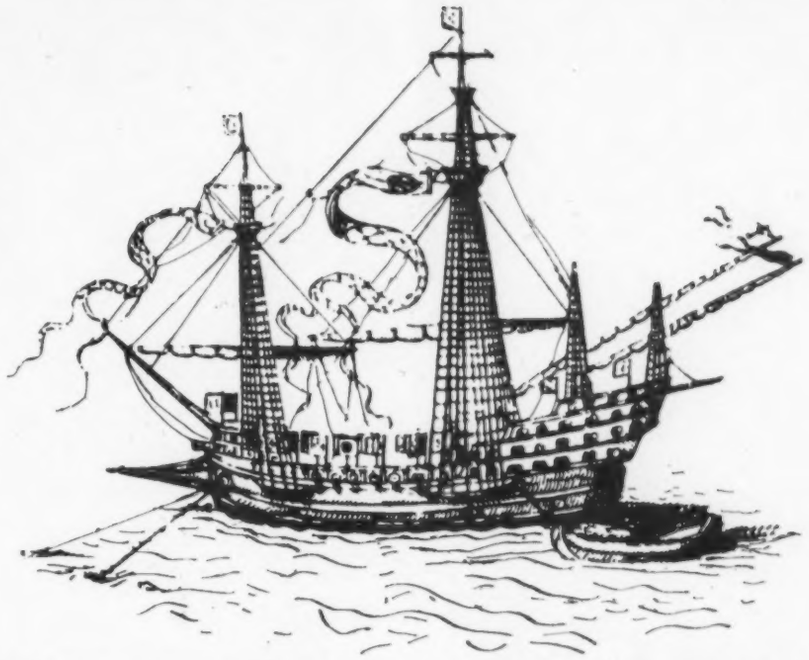
The galley had a long, narrow, canoe like hull that was easy to drive. Stripped of her wide overhanging outriggers and lofty poop, she shows a not unpleasing model, though one wonders how this one could carry sail on those huge yards in any but the lightest of airs. But she looks more seaworthy than some medieval craft

were exercised in firing. Don John passed through the fleet in a frigate, often boarding and inspecting one of the vessels, he was saluted as he passed with volleys of musketry, during which several accidents occured from ball cartridge being fired. At Messina and Gomenizza twenty lives had been lost from this cause and, as orders about it appeared to have no effect, the offense was made punishable by the death not only of the offender (if he could be discovered), but of the captain of the vessel from which the shot was fired. The chroniclers do not state whether the practise then ceased, but it probably did.

At the sound of the signal gun on the morning of Lepanto each ship was at once cleared for action.

By order of Don John (an order much debated and criticised) the sharp beaks or spurs (*espalones*) of the Christian galleys had all been cut off, as it was thought better to sacrifice these somewhat uncertain means of offense to insure the effectual working of the forecastle guns at close quarters. The bulwarks had been strengthened all round and boarding nettings triced up above them. In some of the vessels a portion of the rowers' benches had been planked over to give more room for fighting men, and the fetters of the European slaves and convicts of the Christian fleet were knocked off and many of them were supplied with arms and promised freedom and rewards if they used them well.

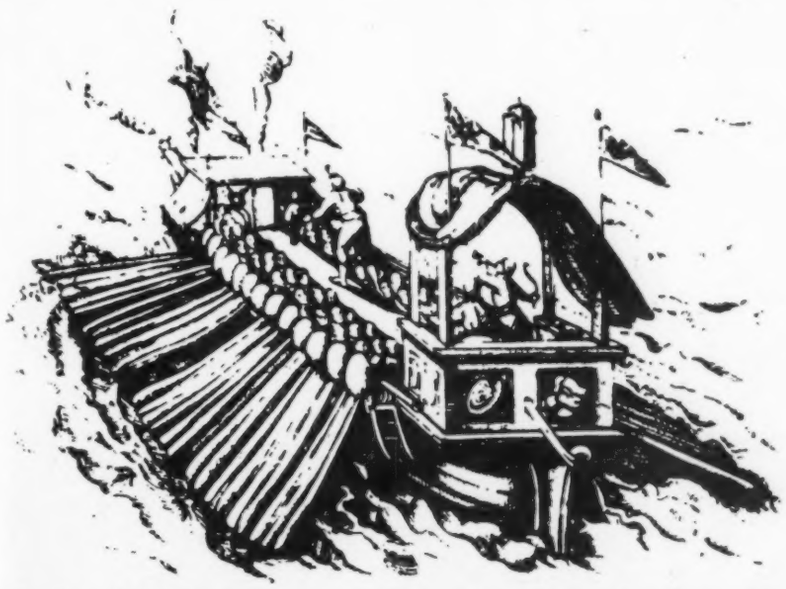
But the Moslem slaves on board the Christian vessels had their chains and shackles freshly riveted and were, besides, fitted with handcuffs, so that they were unable to do anything but tug at the oar. The officers put on their best wrought armor and the arquebusiers and musketeers looked to their weapons. Each sailor had a pike and sword, already well sharpened, and the stewards brought up bread and wine which were placed within easy reach of the combatants. The surgeons made ready their instruments and bandages and it is expressly mentioned that they had tables. There were some leaders in the fleet who did not want to fight at that time, but they were disposed of by Don John's refusal to discuss a question which had been decided in solemn council at Corfu, the leader remarking: "Gentlemen, the time for council is past and the time for fighting has come." And then the order of battle agreed upon when the fleet first came together at Messina was in the main carried out.



How did such a structure as this ever live at sea? True, she was wide and tubby, but her tophamper makes a sailorman shudder. How did she ever get up speed enough to do any damage to an enemy with that absurdly long beak? The artist may be vague about rigging details but he was careful to show all the flags and streamers!

The Christian fleet came in with a fair wind and two frigates were dispatched from the flagship to the right and left, to order the high-sided, heavily-armed Venetian galleasses, commanded by gallant Francisco Duodo, to push forward in advance. Each galleass was at once towed into position by two galleys, and the whole six were soon three-quarters of a mile in front of the fleet, two being in front of each division. The two on the left wing were commanded by the brothers Antonio and Ambrosio Bragadino, who were burning to revenge upon the Turk the skinning alive of their noble brother who had so well conducted the defence of Famagosta.

Although the sultan's fleet was superior to that of the League, both in number of men and vessels, the Christians were really superior in fighting power. To begin with, the Western artillery was the best and it was far better served. Then their fire was rendered more effective by the very crowded condition of the Turkish vessels, the lofty-peaked prows of which seriously interfered



A galley in action, firing her bow guns. The comito, or boatswain, prances along the midship gangway and, with a cruel rawhide lash, encourages the luckless slaves to fresh exertions. The poop of this vessel suggests a Roman trireme, as shown on coins and medals, though it looks more like an elephant howdah than like anything nautical

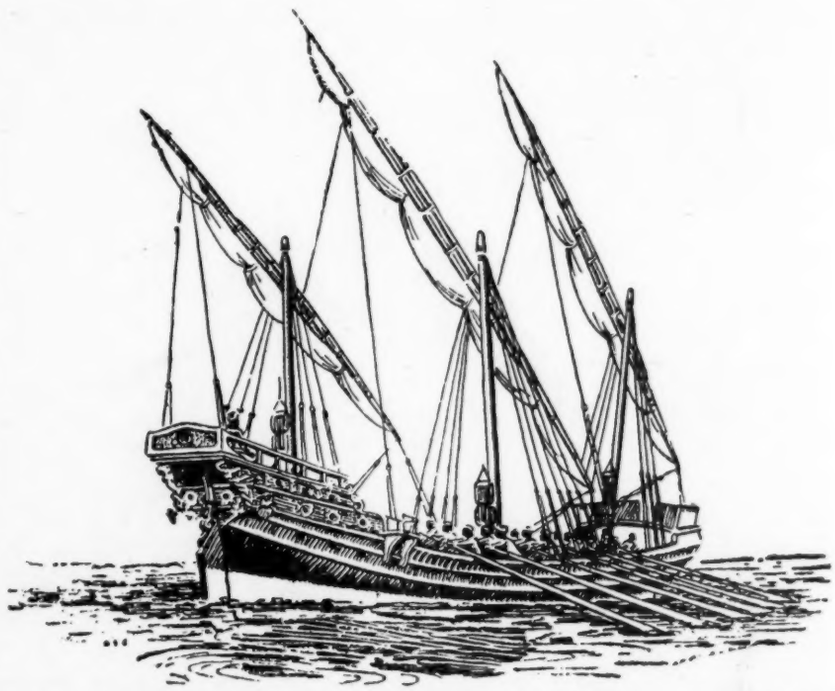
We wonder how accurate a portrait this is. Were Sixteenth Century ships really as lofty as this one, or has the artist drawn largely on his imagination? Imagine trying to go to windward with such a high sided tub, or even fancy her in a beam wind and a lop of a sea

with the working of the guns. As has been said, many of the Turks were armed with the bow instead of the firelock, a great disadvantage except in the case of rain, which extinguished the matches of the muskets; and the Turks had not the skill in firearms which the Christians had acquired by long drill and actual use in warfare. Then the galleasses were a great advantage to the Christian force and all their galleys were more strongly built and better provided against boarders than those of their turbaned opponents.

The flagship of Ali Pasha, the Turkish commander-in-chief, carried an immense treasure and it is known that he threw overboard a casket of jewels before he was taken. His galley was a large and splendid vessel. The deck was of black walnut and she was both internally and externally elaborately carved and gilt. Her cabin, in addition, was richly hung with embroideries of silk and gold, which became pillage with all the treasure. After the vessels were well ransacked the floating dead were fished up and despoiled of their rich clothing and breastplates and from many a quilted jerkin or concealed pocket were brought out sequins and dollars galore.

In the operations of the League for 1572 we find that the commander-in-chief, in his order of sailing as well as of battle, had the right wing, of fifty-two galleys, distinguished by green pennants on the foremast. The left wing, of the same number, had blue pennants at the brace of the yard, (*osta di entena*, brace of a lateen yard). The center and right, consisting of seventy galleys, had yellow banderoles at the peak, and the reserve had white streamers from their poops. On the anniversary of Lepanto Don John had a prospect of another action, at Navarino, the scene of so many battles. A Spanish ship, laden with stores for the fleet and coming from Corfu, had, either from stress of weather or mistake in reckoning, got down to Cerigo. As she returned towards Navarino the morning light found her, with a merchantman in company, just abreast of Modon. Uluch Ali, then in command of the Turkish fleet and on watch there, though unwilling to risk a battle with the Christian fleet, could not as an old corsair resist the temptation of capturing these prizes passing just under his very nose. So upward of forty Turkish galleys dashed out in chase from their lurking place. Don John was immediately informed of what was going on by his light frigates, which were on the lookout, and ordered Colonna, with his fleetest galleys, to the scene of action, while Santa Cruz and Cordona were directed to lead their squadrons down along the shore to cut off the retreat of the enemy. He himself followed with the rest of the fleet, intending to lie as close as he could to the mouth of the harbor of Modon. But no sooner did the

(*Continued on page 82*)



Here is a Mediterranean galley of a slightly later type, though with the same high poop with its carved and gilded decorations and the same spliced yards for the great lateen sails. Her hull, however, does not look clumsy, but has rather fine lines

A Fine Big Auxiliary

THE Duke of Westminster's big auxiliary yacht *Belem* is an interesting craft. Originally a trading vessel, she was built at Nantes, France, in 1896 and made a number of deep water voyages. Indeed, the French subsidy encouraged the building of many sailing craft though they could not all find cargoes and some of them spent most of their time sailing around the world in ballast—earning the subsidy. She was bought before the war by her present owner, taken to Southampton and stripped, practically only the shell being left for she was given new decks, masts and rigging in preparation for her new role. She was then shifted to a yacht builder's yard and the work of fitting up her luxurious accommodation and installing her motors was begun. The war, however, interfered with the work and by the end of 1916 it had practically stopped. When private vessels were being commandeered for various war purposes, it was suggested that *Belem* be turned into a hospital ship, but this suggestion was not carried out.

She is 167.2 feet registered length, 28.8 feet beam. 15 feet depth of hold and her registered tonnage is 548 gross tons and 455 net tons. Her forecastle is 26 feet long, the midship house 22 feet long and her poop is 37 feet.

Her engines are two in number and were installed in 1916. They are four-cylinder Bolinders heavy oil engines with cylinders 15 by 18, each engine developing 240 brake horse power. They run on residual oil and exhaust through silencers and up the mizzenmast.

The auxiliary machinery, including the windlass and two deck winches, is electrically operated. Current is generated by two kerosene lighting sets, one developing 14 horse power and the other 28.

Belem carries enough fuel for a voyage of 12,000 miles, enough to take her half way around the globe. With her large sail spread and with fuel tanks full she could be independent of the shore, as far as oil goes, for a cruise around the world.

Her appearance is handsome for we must confess a weakness for the old clipper bow. Her black hull with its white stripe and painted ports reminds us of the days, long before the recent war, when merchantmen went armed. Indeed, this black and white effect is ascribed to Nelson, for before his day warships were painted yellow.

Belem, the Duke of Westminster's auxiliary, was formerly a French merchantman

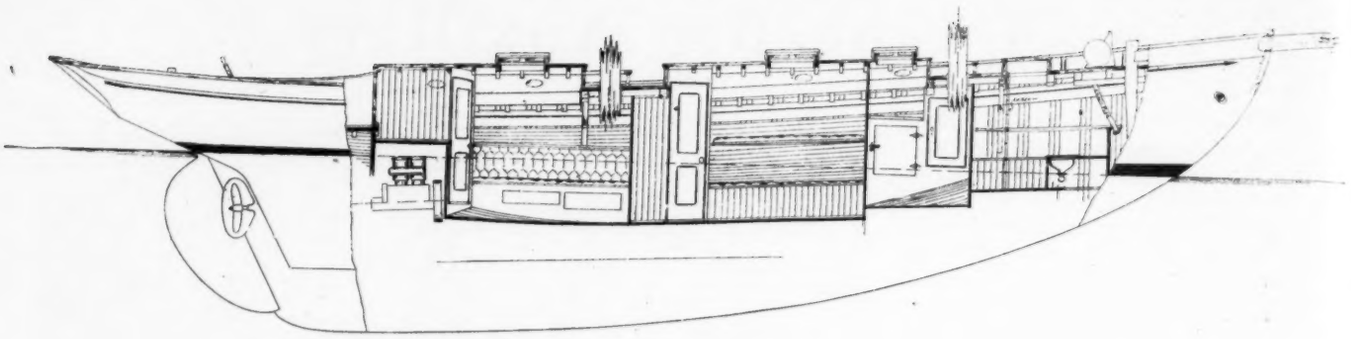
The Motor Boat Show

THIS year's New York Motor Boat Show, which opens on the evening of February 20th and closes on the 28th, bids fair to be the largest and most interesting exhibition every held. All records for applications for space in the Grand Central Palace have been broken and many firms that have heretofore been content to show their products in the gallery are this year to be upon the main floor. The scope of the show has been enlarged, for during the war most of the members of the National Association of Engine and Boat Manufacturers have built larger boats, engines and accessories than ever before. Yards that have built small motor boats have constructed submarine chasers; yacht building yards have turned out tugs and thousand-ton minesweepers for the Navy or have devoted themselves to the assembling of fabricated ships. A brass foundry that has specialized in propellers will exhibit, in addition to their yacht propellers, a single bronze blade and hub, for a large ship, that weighs 9,000 pounds. An engine builder will display a huge oil engine of 18 tons weight. Others will show new devices adapted rather for the commercial field than for pleasure craft.

One of the interesting exhibits will be *Miss America*, Mr. G. A. Wood's challenger for the British International Trophy, which will be raced for in England in August.

There are many new exhibitors and the show in general should prove to the public the stability and dignity of the association which is its sponsor. Pleasure craft will, of course, be seen in the usual numbers, but the larger side of the industry and its application to commercial uses will receive considerably more attention than ever before. In a later issue we plan to comment upon some of the features and the tendencies of the boat and engine building trades as exemplified by the exhibits at the Palace.

The exhibition committee includes John J. Amory, chairman; James Craig, Charles Criqui and Henry R. Sutphen, president of the association.



A Sturdy Schooner

BUZZARD'S BAY and Nantucket Sound are fine yachting grounds for there usually good breezes are found, though there is plenty of rough water. Indeed, a stiff southerly wind and an ebb tide stir up a short steep sea in Buzzard's Bay that bothers any but an able craft. A yacht to be used on those waters must be primarily a sea boat and Mr. Alden has chosen the fisherman type in the bald-headed schooner illustrated on this page. Her construction is sturdy, the planking being an inch and a half thick and her frames are all sawed. Her sail plan is fairly small and her short ends give her a very businesslike appearance. As she is an auxiliary, topmasts and topsails are dispensed with, saving weight and a multiplicity of gear.

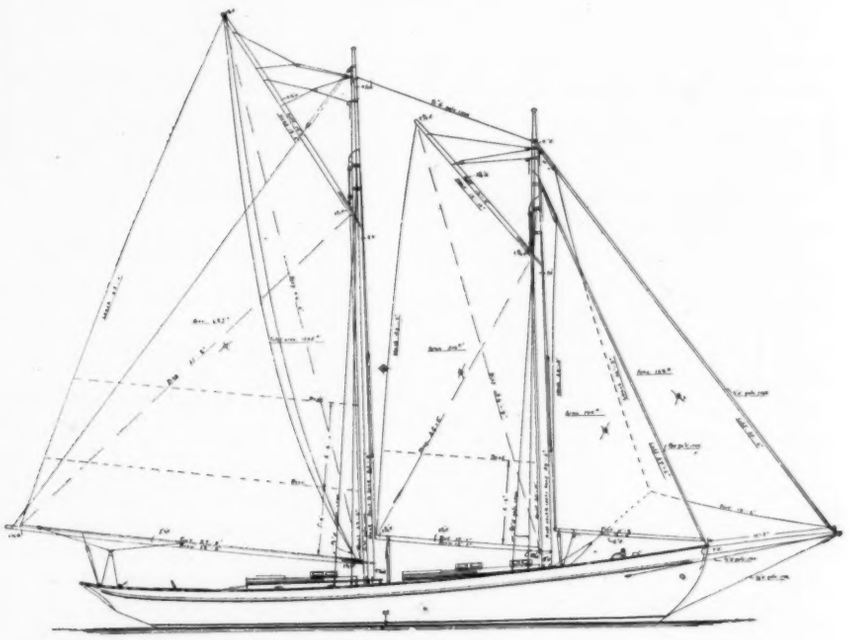
The boat is 50 feet overall, 39 feet 6 inches waterline, 13 feet beam and 17 feet draught. She will carry about 8 tons of ballast, half of which will be inside and half out. She has bulwarks about a foot high and cabin houses which, though low, give over 6 feet headroom.

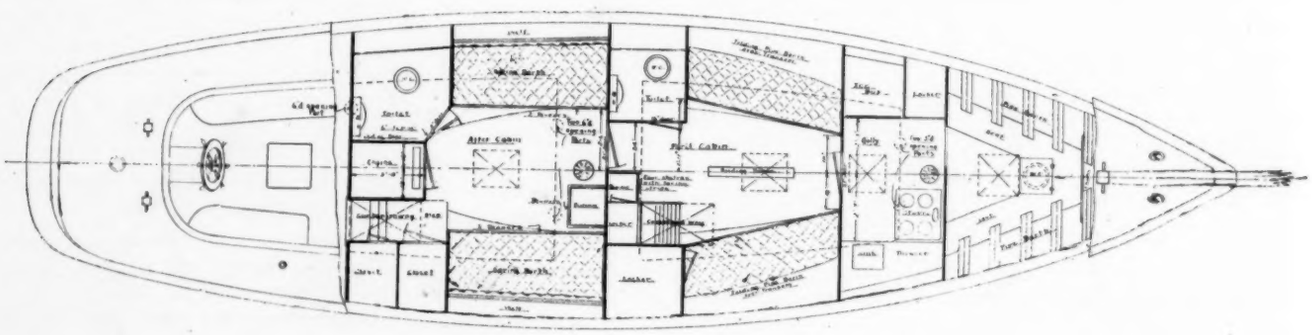
The interior was laid out to suit the owner's requirements and has two distinct cabins, each with its toilet. Forward is the forecastle with two pipe berths and a toilet. Stowage space is provided under a seat each side. Next comes the galley, with coal range, ice box, sink and dresser. There is good head room under the cabin trunk. Next aft is the forward cabin with its own companionway to the deck and a toilet room on the port side. A folding table stands in the middle of the room and there is a folding pipe berth on each side over the transom so that this cabin provides sleeping space for four persons. A large locker on the starboard furnishes ample stowage space.

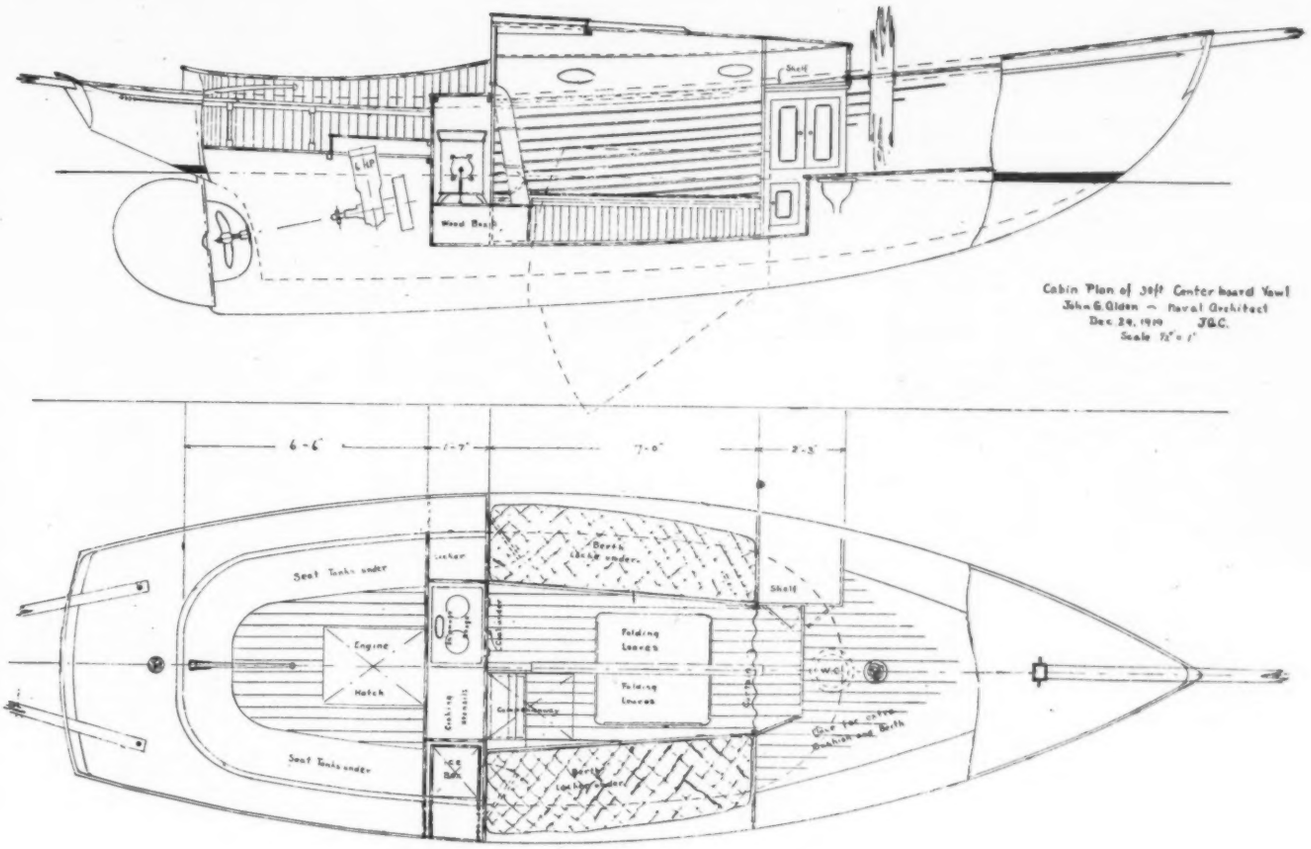
The after cabin, reached by a door from the forward one, has a wide spring berth on each side with the usual shelf above the cushioned seat-back. There is a toilet room to port, lockers outboard to starboard and a companionway to the cockpit.

A two cylinder engine is in a compartment between the after cabin and the cockpit and is completely enclosed.

The boat should be handy under sail and six miles is expected of her under power. The trouble with many heavy auxiliaries is that they are really low powered motor boats and can do nothing under canvas. Mr. Alden's schooner has sail enough to drive her at a fair speed, and yet the rig is snug and can be easily handled.







An Able Centerboard Yawl

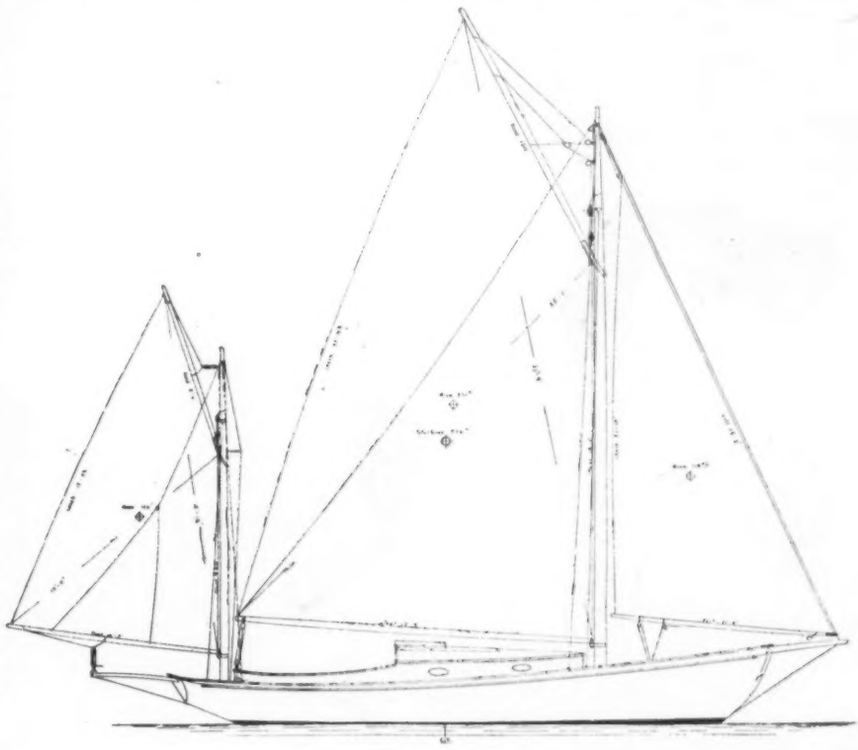
THE cruising yawl, whose plans are shown on this page, was designed by Mr. John G. Alden. She is 30 feet long over all, 24 feet L. W. L., just over 6 feet extreme beam, and draws 3 feet 8 inches with the centerboard up. Her ends are short, but not unpleasing in contour, and her sail plan (554 square feet area) is well proportioned. As is proper in a yawl the centers of effort of jib and mizzen, mainsail alone, and of all three sails lie in an almost vertical line, so that the little ship will handle well under the usual combinations of sail. Under mainsail alone, a yawl is almost as handy as a cat boat for knocking about a harbor looking for an anchorage.

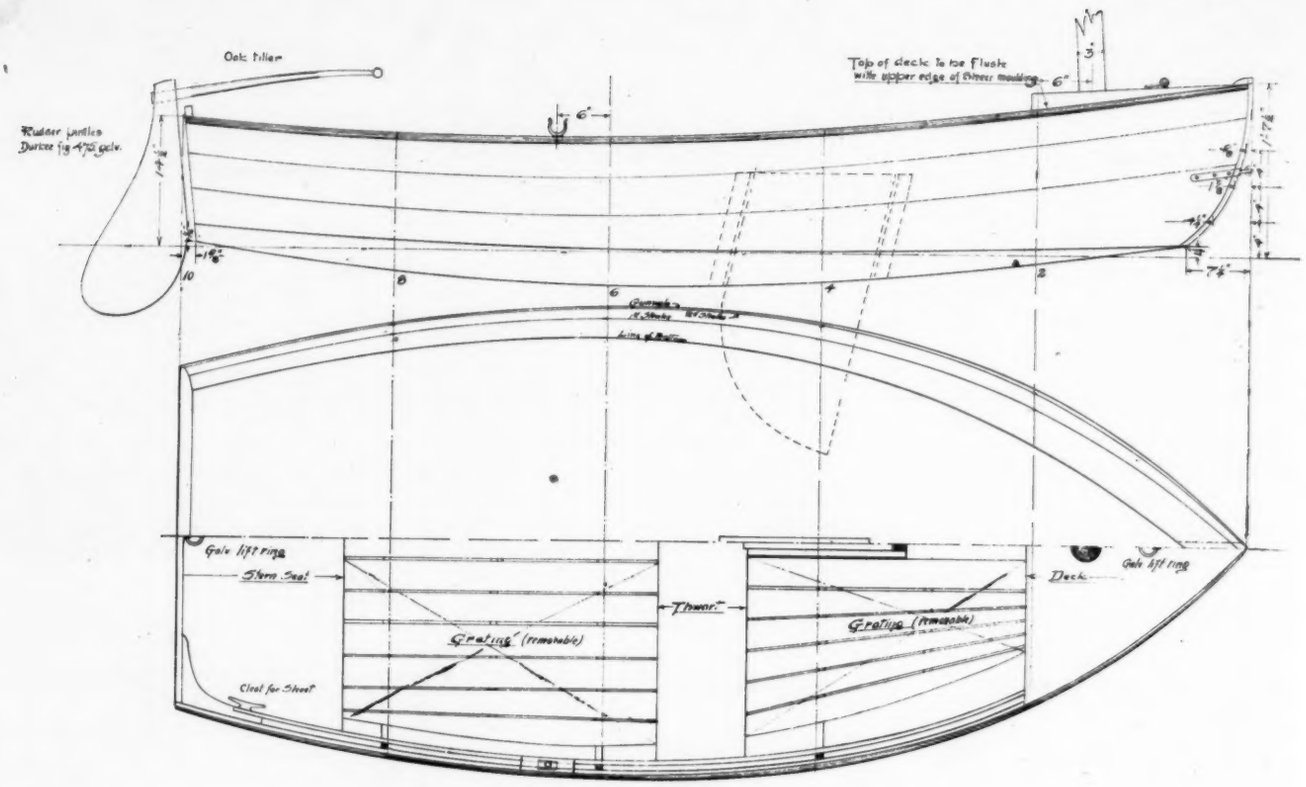
The cabin plan is interesting, with coal range and ice box aft, under a short bridge deck. This spells comfort for the chef in bad weather, when cooking in the usual cubby hole forward would be difficult.

The cabin has the usual transoms each side, and folding table on the centerboard trunk. A large locker forward gives stowage space and in the fore peak there is room for an extra berth or for a mattress for an occasional guest.

Under the cockpit, with a low hatch over, is a single cylinder 6 H. P. motor. The hatch is large enough to allow the motor to be lifted out bodily without disturbing the cockpit floor, or gives room to work.

All sheets are belayed within easy reach of the helmsman, so that the boat may be used as a singlehander.





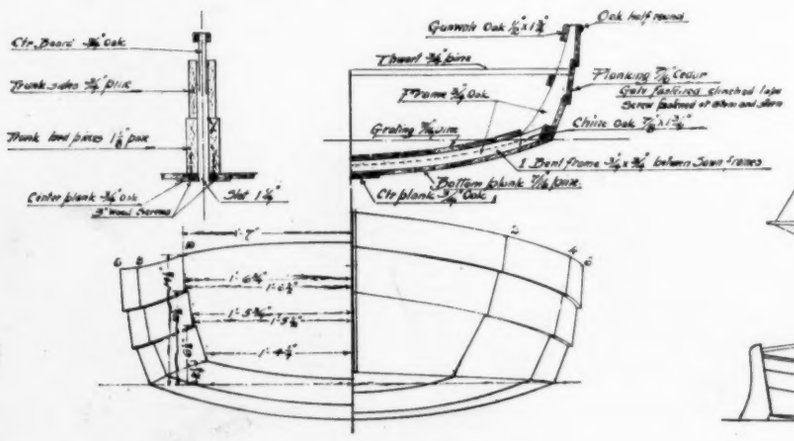
The Victory Dink

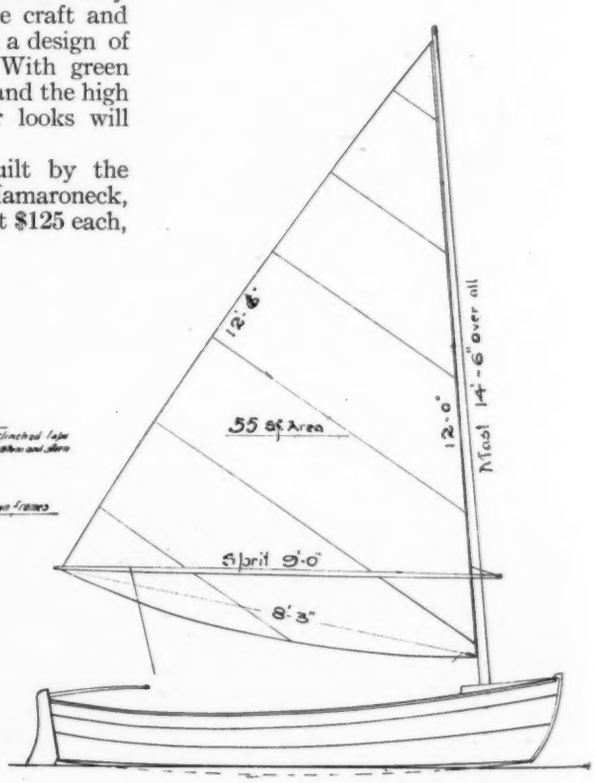
ONE of the most interesting classes that will be seen on the Sound this summer will be the Victory Dinks. The list of owners of these tiny craft has not yet been made public but includes a number of the most prominent yachtsmen in the East.

Mr. James Sparkman, we are told, suggested the class and the boats were originally intended to serve as tenders for the Victory class of sloops designed by Mr. William Gardner. Mr. Charles D. Mower was commissioned to design the small boats and, from present indications, there are likely to be fifteen or twenty of them built.

The boats are 10 feet long over all, 4 feet 3 inches extreme beam and 4 feet wide upon the bottom. Their sail area is 55 square feet. With their good beam and round bottom they should be very able little craft and Mr. Mower has produced a design of attractive appearance. With green bottoms, bright topsides and the high leg of mutton rig, their looks will certainly be "sassy."

The boats will be built by the Sound Machine Shop at Mamaroneck, New York, and are to cost $125 each, exclusive of war tax. This figure includes spars, sails and a pair of oars. Judging from the caliber of the men who are to have them, the class should furnish some lively racing this coming summer.





The Sub Chasers as Sea Boats

How they performed at sea, and their qualities as shown by eighteen months of hard service

By HERBERT L. STONE, Lieutenant, U. S. N. R. F.
Commander Squadron 1 (Sub-chasers), Hampton Roads Base

ALTHOUGH the 110-foot submarine chasers which the Navy Department built during the World War to combat the dreaded and elusive U-boat have received a lot of publicity, and much has appeared in print about them, very little has been told of the actual value of the little fighting craft and of their performance at sea. In fact, it has been difficult for one not actually acquainted with them to separate the "bunk" from the truth of what has appeared and to judge just how good or how bad the boats were. Therefore, at the time when a number of the boats are likely to be on the market for commercial or pleasure purposes, something about the actual performance of the craft, from one who was intimately connected with their actual operation at sea during war times, might prove of interest.

There are two distinct and separate considerations one must bear in mind in analyzing the value of these boats, or, in fact, of any vessel built for naval purposes. One is the purely naval value for offensive or defensive work, the other her seagoing capabilities, irrespective of her naval worth. In most cases the two are closely interrelated. When the 110-footers first came out—even before they were finished, in fact—a strong prejudice against them developed in the Navy and they were pretty freely condemned. After the boats were in actual service, however, doing duty along the French Atlantic coast, in the English Channel, on the Adriatic and far away Agean Seas, as well as on both of our own coasts, this feeling changed, and before the war ended they were generally looked upon as having earned the title to be considered mighty useful units of the fighting force of the Navy.

When the boats were originally conceived and the orders for them placed, we naturally relied on the experience Great Britain had had with small motor driven craft in the submarine warfare and based the size and type of our craft on the lessons that country had learned. The standard "M. L." boat of the British Navy was 85 feet in length and it was figured that a 110-footer, with a model better adapted to keep the sea, would be about right—a small, handy, fast craft of which a great number could be turned out being what was desired. As a matter of fact, as subsequent experience showed, the boats would have been better if they had been larger, say from 150 to 160 feet long and wider and deeper in proportion.

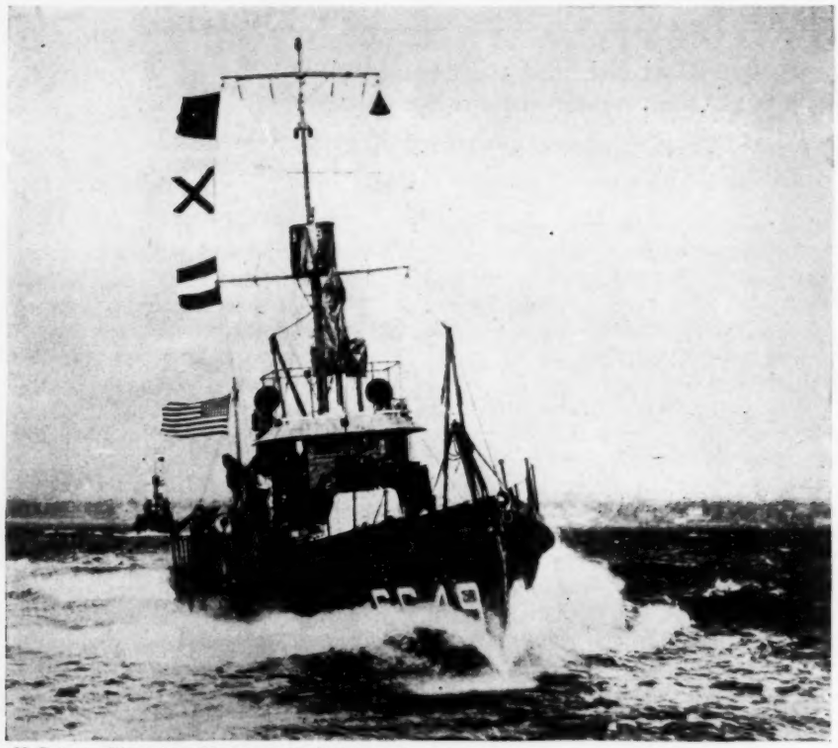
As it was, they were too small to give a steady gun platform, even in a moderate sea, their cruising radius was not great enough, and with all the gear aboard for proper offensive warfare, such as the "Y" gun, depth bombs (400 pounds apiece), ammunition and listening tubes, they were brought down below their designed lines and could not make the speed originally planned. Instead of the 18 or 19 knots expected, about 16 knots was the best they were capable of, and in actual service from 14 to 15 knots was the maximum. Even this speed could not be made if the sea was moderately rough. When used for escort purposes with the faster troop and merchant convoys, as they were on this coast and in the English Channel, they had hard digging to keep up with a 14-knot ship. In a head sea that the large vessels hardly noticed, the little chasers would bury themselves and throw their screws out of water so that they could not keep up without tearing themselves all to pieces.

The specially designed 3-inch Poole gun which they carried forward was an excellent piece of mechanism and had an effective range of something over 2,000 yards, but the quick motion of the little ships, coupled with a roll induced by the recoil of the gun itself, made accurate marksmanship very difficult. They carried, however, the same sized Y gun for depth bombs as the destroyers, had also a launching track over the stern for bombs, and in this respect, as well as in their submarine listening equipment and wireless telephones for quick communication, they were well equipped for worrying enemy subs. While the records have not all been made public, it is said that the chasers actually accounted for several enemy subs on the other side, and on this side almost the only engagements with the enemy were with chasers, sometimes accompanied by a single destroyer.

The later step of the Navy De-

U. S. Navy Photo

The chaser had enough sheer and was not unduly high sided amidships and was dry, for a boat of her size, at moderate speeds. This photograph was taken on a trial trip, before bow-gun, Y-gun or depth charge racks were mounted



U. S. Navy Photo from Underwood & Underwood

The chasers proved themselves to be able craft and, properly handled, fit to go anywhere. They went to sea when ordered and stayed there until their tour of duty was ended, though larger vessels sought shelter in port

partment to the so-called Eagle boats, built by the Ford Co., and 204-feet long, was dictated by the recognition of the fact that a larger vessel was required to carry the necessary fighting equipment that this peculiar type of warfare demanded. The Eagle boats came out too late, however, to demonstrate their worth or to make a comparison of the two types possible, though it is the consensus of opinion that the subchaser was the better model of the two.

Turning now to the boats themselves and their performance at sea, in which the yachtsman is probably more interested, there is no doubt that the chasers proved themselves unusually able little craft and, properly handled, fit to go anywhere. The fact that they were sent across the Atlantic under their own power, some of them in February and March, 1918, (an unusually severe winter), and that some of them frequently stayed out in weather that forced many larger boats to seek shelter attests this fact, while a dozen of them came around from Puget Sound to Hampton Roads and New London, a voyage of some 8,000 miles, most of the way without a repair or supply ship with them or without a mother ship as escort, which is customary in the Navy in the case of small craft. Most of these vessels arrived at their destination in excellent condition and ready for service after only minor overhaul.

The usual route of the chasers that were sent across the Atlantic was to Bermuda, thence to the Azores, Spain and France, or the Mediterranean, as the case might be. They were accompanied by an escorting vessel, or fuel ship, and usually by a Navy ocean tug which could take any in tow that got into trouble. They were fueled at sea in good weather. They had a "steaming" radius of from 1,200 to 1,400 miles on two engines at a speed of about 10 knots, and some 650 miles at full speed on three engines.

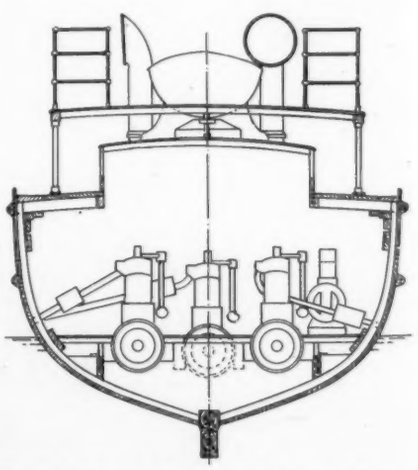
On one of these trips across one chaser, manned by a French crew, became separated from the convoy in bad weather, ran short of fuel and, not being sighted, the crew rigged tarpaulins and blankets as sails and made port after being out, and unspoken, for 39 days, if my memory serves me.

The boats had excellent forward sections, with good flare and an easy entrance, yet with plenty of buoyancy, and I never felt them pound, though I've seen them throw a quarter of their length out of water when lifted on a sea. The after sections were also somewhat sharp and they did not slap aft, but there was a lack of bearing there which, combined with rather slack bilges and deep sections amidships tended to make them roll easily and deep. In fact, they rolled so far that even in a moderate beam sea they would roll the wing propellers, which were not deep, either out of water or so near the surface as to cause them to race badly. With a strong beam wind and sea they would roll down so far to leeward that it was sometimes necessary to throttle the windward engine well down to prevent excessive racing as that screw was lifted. With more bearing aft and bilges not quite so slack they would have rolled less, while the former correction would have made them undoubtedly faster for the power. This absence of bearing aft caused them to squat badly at full speed and drag a big wave after them. This gave a false appearance of speed and was apt to fool one as to the actual number of miles being made.

The sheer was good and there was not excessive freeboard amidships, while the boats, for craft of their size, were dry at low speeds. Of course, when they were driven plenty of broken water came aboard, mostly just forward of amidships, where it would hit the wheel house. As its windows were not water-tight this pilot house was a pretty wet place in bad weather.

They were at their worst in a following or quartering sea, as they yawed badly and were hard to steady with the balanced rudder they had. This was undoubtedly accentuated by bad steering and by giving her too much rudder, and to the fact that on most of the boats the steering gear was so arranged that it took about six full turns of a good sized wheel to get her from hard over to hard over, so that she did not seem to respond to a little rudder. I have never seen one of them pooped, however, and on most other points they steered easily.

Except at full speed there was not

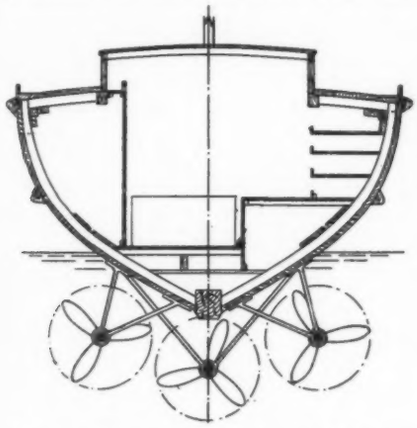


The midship section of the chaser shows a rather slack bilge and a good deal of deadrise, with plenty of tophamper

excessive vibration. In fact, very little vibration was felt forward and it was most noticeable aft. As the galley was located right over the screws, this got shaken up pretty badly when they were driven, and eggs were mostly scrambled when they came off the stove under these conditions. Indeed, at such times very little cooking was possible.

Of course the boats were lively in a seaway. Little boats always are. And as they had to be driven frequently, regardless of conditions, they were wet, for water would find its way below through deck openings and frequently through the deck itself. But when they could be slowed down, this would be remedied somewhat.

As to construction, all that can be said is that they were built under war pressure and there were good, bad, and indifferent among them. Those that were built at first class yards, such as Lawley's, the New York Yacht, Launch and Engine Co., and the like, where good boatbuilding practice was followed, were good and as tight as could be expected under the service they were in. Those built in yards where they had imperfect knowledge of wooden boatbuilding, and those built in some of the Navy Yards where this class of work was new to them, were poorly built. The principal faults in the poorly built ones were: leaky decks, inadequate caulking and a tendency to lose their shape under hard service. This last resulted in some bearing trouble which need not have been serious if properly watched and attended.



Aft the chaser was quite fine and her sections were sharp. It did not take much of a roll to make the wing screws break the surface

U. S. Navy Photo

With all their gear on board they had considerable top weight and rolled deep, though easily, particularly with a strong beam wind and a good sea. Under such conditions the windward engine would often have to be throttled well down to prevent excessive racing

On the whole they earned a name for themselves as fine little sea boats; and over a year of hard service under war conditions proved that the designers, no matter how hastily the plans were prepared, turned out a fine, seaworthy model, probably as good for sea work as any power boat of their size yet designed.

Seen from the deck of a big ship they appeared very small to withstand the weather they sometimes met and I remember the surprise of a certain British Admiral when he heard how far we sent them off shore with convoys on this side of the Atlantic. This Admiral was Senior Officer of a big merchant convoy, and at the meeting of convoy captains the day before we sailed, he said to me, "How far does that chaser escort go with us?"

"Our orders are for 300 miles from the point of departure, Sir," I answered.

"My word! You don't say those little fellows go as far as that. I don't see how they do it. We do not send our boats anywhere near that far on the other side," was the astounded exclamation.

With one engine taken out and the interior changed to suit the requirements of yachting they would make fine pleasure boats with a speed up to 12 knots, for there is lots of room in them. They would be expensive to run, however, and one would want to scrutinize closely the builder's name plate before purchasing.

© Edwin Levick

Elida, a 23-mile 62-footer, with a pair of Model G R 6 cylinder dual valve in the head motors

Early Races for the America's Cup

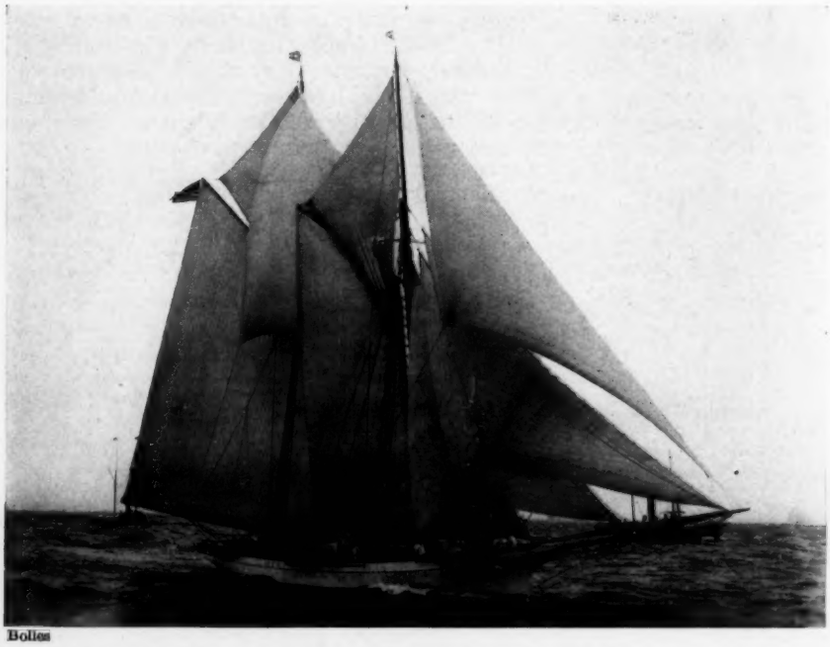
How the Cup was won by the famous old schooner, and the first attempts to "lift" it

By CHARLES H. HALL

ON a bright June morning sixty-nine years ago a black schooner yacht towed down to Sandy Hook, cast off the hawser, made sail and stood to the eastward. She was the *America* and was bound for England to take part in the yachting events to be held that summer. England was giving a party—the first one of the great international expositions—and had invited the world to come. The shipwrights and designers of the United States at that time led the world. Their ships were the fastest, their captains the most skillful. Though yachting on this side of the Atlantic was in its infancy, the New York Yacht Club having been organized only seven years before, a group of New York yachtsmen had sufficient confidence in the local talent to send a schooner to try conclusions with the British and, incidentally, to pick up a few dollars in cash prizes. Accordingly a syndicate was formed, the first one in the history of the New York Yacht Club. Its members were Commodore John C. Stevens, Edmund A. Stevens, his brother, George L. Schuyler, Colonel James A. Hamilton, J. Beekman Finley and Hamilton Wilkes. They turned to George Steers, who had modeled some very successful pilot boats, for the design of the new yacht and placed a contract for her building with William H. Brown, who had a shipyard at the foot of East 12th Street, New York. This contract was a curious document. When the yacht was ready for sea she was to be tried for twenty days at the syndicate's expense and need not be accepted unless she proved the fastest vessel in the United States. If she turned out to be satisfactory, the syndicate had the option of taking her to England. If unsuccessful there, she could even then be returned to her builder!

She was not delivered until the 18th of June, though due on April 1st, and she sailed three days later for the other side. Her principal dimensions were: length over all, 101 feet 9 inches; length on the water line, 90 feet 3 inches; extreme beam, 23 feet; extreme draught, 11 feet. Her masts, as was the custom of the day, were stepped with considerable rake and her total sail area was 5,263 square feet. She was planked with three inch white oak and her bottom was sheathed with copper.

She did not show to very great advantage in her first trial races on this side as the veteran sloop *Maria*, a larger boat, defeated her several times. She did, however, win a number of races against other craft.



Bolles

The schooner yacht Columbia made the fastest time ever recorded for a cup race. On October 18th, 1871, she sailed the 40 mile course in 3 hours, 1 minute, 33½ seconds. The next day she lost the only race in the history of the Cup in which an American yacht was defeated

On the run across the Atlantic she made good time, arriving at Havre, France, twenty days out from the Hook. Her best day's run was 284 nautical miles and on six days she reeled off over 200 miles.

Some three weeks were spent in the French port, refitting, and on the last day of July the *America* sailed for Cowes. The next morning the English cutter *Laverock*, one of the crack yachts of the day, ran out to meet the stranger and showed that she expected a brush. It was a beat to windward and the Yankee schooner showed her heels to the Britisher in the short run to port.

British yachtsmen were not impressed by the *America's* looks, for she was radically different from the English type, but seemed to have a wholesome respect for her speed. Commodore Stevens found it exceedingly difficult to obtain a match though he offered to sail against any schooner and, later, was willing to take on any cutter. Finally he posted a challenge to match the *America* against any British vessel whatever for any sum from one to ten thousand guineas, merely stipulating that there should be not less than a six knot breeze. After this offer was withdrawn, Mr. Robert Stephenson matched his schooner *Brittania* against the *America* for a race twenty miles to windward and return for stakes of 100 pounds. August 28th was the date fixed for this match. The course was laid from the Nab lightship, on the easterly side of the Isle of Wight. It was sailed in a cracking breeze, so strong that *America* broke her foregaff and lost time in making repairs, and the Yankee schooner won by nearly an hour.

Meantime Commodore Stevens was invited to enter the open regatta of the Royal Yacht Squadron on August 22nd. The course was around the Isle of Wight and the race was to be sailed without time allowance. The prize was a trophy, put up by the club, valued at 100 guineas. Though the course was notoriously an unfair one for a stranger, the *America* was entered but her owners decided that she would not start unless there was a good breeze.

In those days yacht races started from an anchor and in this case the eighteen yachts entered were lined up in a double row, cutters in the first line and schooners some 300

yards astern. It was rather a mixed fleet, the smallest yacht being the cutter *Aurora* of 47 tons and the largest the big three mast topsail schooner *Brilliant* of 392 tons.

The first leg was a run of twelve miles and the *America* had worked through to fifth place when the Nab was reached. The next leg was to windward and the visitor left the others astern rapidly, so rapidly that there was not a yacht in sight from *America's* deck when St. Catherine's Point was reached. Here a head tide was met and the little *Aurora* picked up the leader, with the cutter *Arrow* close astern, but after turning the point *America* had a leading wind and made over thirteen knots to the Needles, arriving in Cowes about eight o'clock.

The trophy won in this race, though often called the Queen's Cup, was not donated by Queen Victoria but was put up by the Royal Yacht Squadron. It became the property of the yacht winning it and Colonel Stevens brought it back to New York with him as practically the only spoils of the summer's campaign. The queen did put up a cup for a race on August 25th, but the *America* did not start in this regatta, probably because the wind was too light when the starting gun was fired. About an hour and a half after the start she got up anchor and sailed over the course, finishing close to the winner, though not timed.

The schooner's owners offered her for sale in England and she was bought by Lord John de Blaquiere for $25,000. Her rig was cut down, iron braces were fitted in her hull and she was raced in 1852 with only moderate success, probably due to the tinkering the British had done with her and to the fact that her new skipper never seemed to get the most out of her flat canvas. She was sold in 1853 to Lord Templeton, who used her for a year and then she was hauled up in the mud at Cowes. Sold again in 1859, she was rebuilt, a piece at a time, without changing her original form. Sold once more, she cruised to the West Indies and back and on the outbreak of the Civil War was bought by a Savannah man and became the *Memphis*. She was finally chased up the St. Johns River by a Union gun boat and scuttled and was found there later by the U. S. S. *Ottawa*, with her bottom full of auger holes. She was raised, repaired and taken into the Union Navy and served with the blockading fleet off Charleston, S. C., until 1864, when she was sent to Annapolis as a training ship for the midshipmen of the Naval Academy.

She was finally sold by the government and bought by General B. F. Butler, in the possession of whose family she had since remained. In 1880 she was once more rebuilt and again in 1885. To-day, with masts out, she lies alongside the dock in an eastern yard, unnoticed and apparently forgotten.

Bolles

America was rebuilt several times in her long life and modernized in rig. Here she is as she appeared when last in commission

Commodore Stevens, wishing to have the cup won by *America* stand for international yacht racing, decided in 1857 to turn it over to the New York Yacht Club to be held as a permanent challenge cup open to competition by any organized yacht club of any foreign country. Accordingly, he and the four surviving members of the original syndicate presented it to the club in trust with a Deed of Gift that is simply a straightforward letter, in which the following conditions were made:

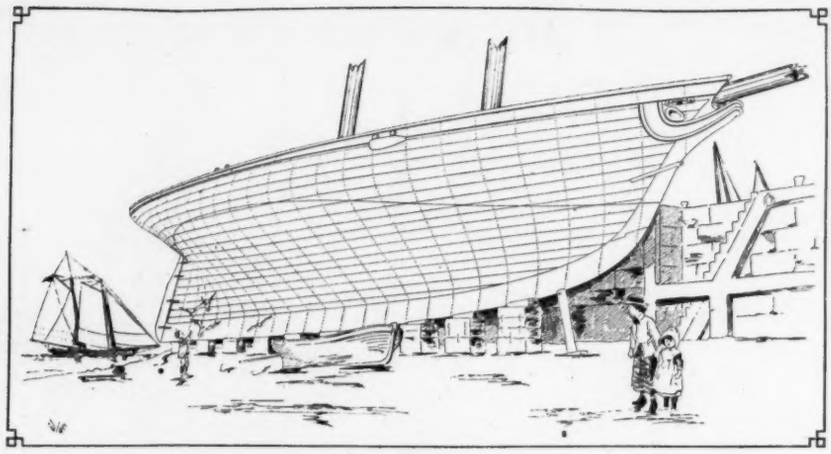
"Any organized Yacht Club of any foreign country shall always be entitled, through any one or more of its members, to claim the right of sailing a match for this Cup with any yacht or other vessel of not less than 30 or more than 300 tons, measured by the Custom House rule of the country to which the vessel belongs.

"The parties desiring to sail for the Cup may make any match with the Yacht Club in possession of the same that may be determined upon by mutual consent; but in case of disagreement as to terms, the match shall be sailed over the usual course for the Annual Regatta of the Yacht Club in possession of the Cup, and subject to its Rules and Sailing Regulations—the challenging party being bound to give six months' notice in writing, fixing the day they wish to start. This notice to embrace the length, Custom House measurement, rig, and name of the vessel.

"It is to be distinctly understood that the Cup is to be the property of the Club, and not of the members thereof, or owners of the vessels winning it in a match; and that the condition of keeping it open to be sailed for by Yacht Clubs of all foreign countries, upon the terms above laid down, shall forever attach to it, thus making it perpetually a Challenge Cup for friendly competition between foreign countries."

Notice that the terms are elastic and are to be determined by mutual consent or, if the two sides cannot agree, the challenger may sail over the regular course of the holding club and subject to its racing rules.

Though the fact that the Hundred Guinea Cup won by the *America* had been offered as a perpetual challenge trophy open to all foreign nations was announced by the New York Yacht Club to the yacht clubs of the world, years went by before there was a challenge. In the interim American yachts had crossed the Atlantic, *Henrietta*, *Fleetwing* and *Vesta* raced across in December of 1866, and *Sappho* made her unsuccessful visit in 1868. In that year Mr. James Ashbury's new schooner yacht *Cambria* had defeated the



Through the courtesy of the English "Yachting Monthly" we reproduce these perspective drawings of America, worked up from her lines

Sappho by a large margin and apparently he reached the conclusion that he had a world beater. He wrote to the New York Yacht Club and suggested that it select the fastest schooner yacht of about the *Cambria's* size, send her to Cowes to take part in the English yachting season and then race against the *Cambria* back to Sandy Hook for a piece of silver valued at $1,250. On arriving here the two yachts were to race around Long Island, the best two out of three times, for the America's Cup. He made other curious suggestions and fritted away the summer of 1869 in letter writing, finally deciding to come to this country. He raced the old *Dauntless* from Ireland to Sandy Hook and nosed her out at the finish of a twenty-two days' run. As Mr. Ashbury and the New York Yacht Club were still unable to agree upon the terms of a match, the club, acting under the Deed of Gift, gave him the option of sailing one race over the Club's regular course in New York Bay and against its fleet. Mr. Ashbury protested against the club's interpretation but decided to sail and the regatta was fixed for August 8th, 1870. Twenty-three yachts defended the cup, seven of them keel schooners and the rest centerboarders.

The *Cambria* was a keel schooner of the type produced by the British measurement rule of the period, deep and narrow. She was 108 feet from stem to stern post, 21 feet beam, and with a draught of 12 feet. The fleet that sailed against her comprised the pick of American schooners and even included the old *America*, entered by the Naval Academy and commanded by a naval officer. The start was from an anchor and the *Cambria* was given the weather end of the line, with the *America* next to her, but the wind shifted just before the starting gun, so that these two yachts were to leeward. The starting line was off Staten Island and the course was through the Narrows, down the Lower Bay to the South West Spit buoy, to Sandy Hook lightship and return—about 38 nautical miles. The little schooner *Magic* was the first away and *Cambria* also got a good position at the start, but *America* was the last to get going. The *Magic*, in the beat down the Bay, opened up a commanding lead in the early part of the race and the old *America* walked through the entire fleet and was second boat at the Spit buoy, the challenger being then in twelfth place. On the reach out past the Hook and the beat to the lightship, *Idler* and *Dauntless* passed the *America* and *Cambria* worked up to eighth place, turning the lightship twenty-four minutes behind the *Magic*. It was a broad reach back to the Spit and the racers tore along at a great pace, *Dauntless* doing the seven miles in 41 minutes. Just before jibing around the Spit buoy for the run home, a hard puff off the land struck the *Cambria* and away went her foretopmast. At this time she was hopelessly beaten so that the accident did not affect her chances of winning the cup. On the run up the bay the British schooner fell back to tenth position and finished twenty-seven minutes and three seconds, actual time, after the *Magic*, the latter's time allowance stretching this to 39 minutes 12 seconds. The nineteen-year old *America* beat the challenger over 13 minutes, boat for boat, and about half a minute more on corrected time.

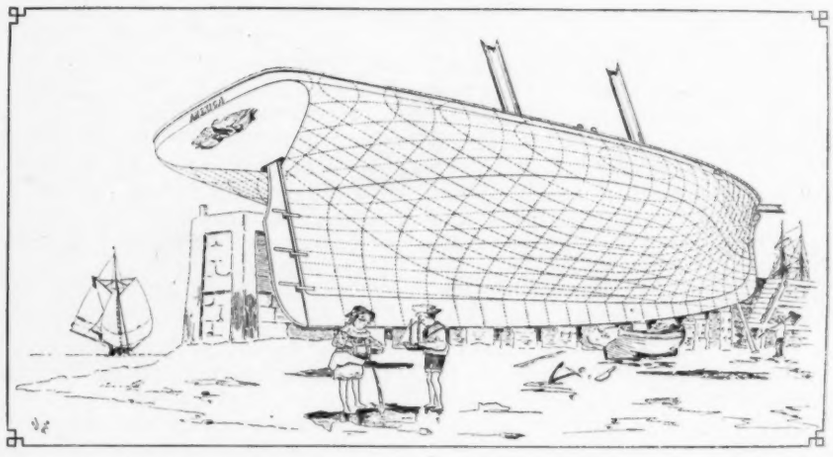
When "instantaneous photography" was new, Charles E. Bolles was a master of the art. The late A. Cary Smith said of him: "He's the only man who knows how to hold a camera." His yacht photographs are not merely portraits, they have a life-like quality that is not often seen.

YACHTING is the fortunate owner of the Bolles negatives. Their quality may be judged from the examples shown on the four succeeding pages.

Mr. Ashbury took his defeat in a sportsmanlike spirit and accompanied the New York Yacht Club on its annual cruise. Several matches were arranged off Newport between the *Cambria* and American schooners but the Britisher won only a single race, that against the *Idler*.

As soon as Mr. Ashbury reached home he built a new schooner, as he had set his heart upon winning the America's Cup. He felt that it was unfair to ask him to race against a fleet and at once attempted to settle this point and several others with the New York Yacht Club. The next few months saw a heated controversy and finally Mr. George L. Schuyler, the sole survivor of the original syndicate, to whom the question was submitted, interpreted the word "match" in the Deed of

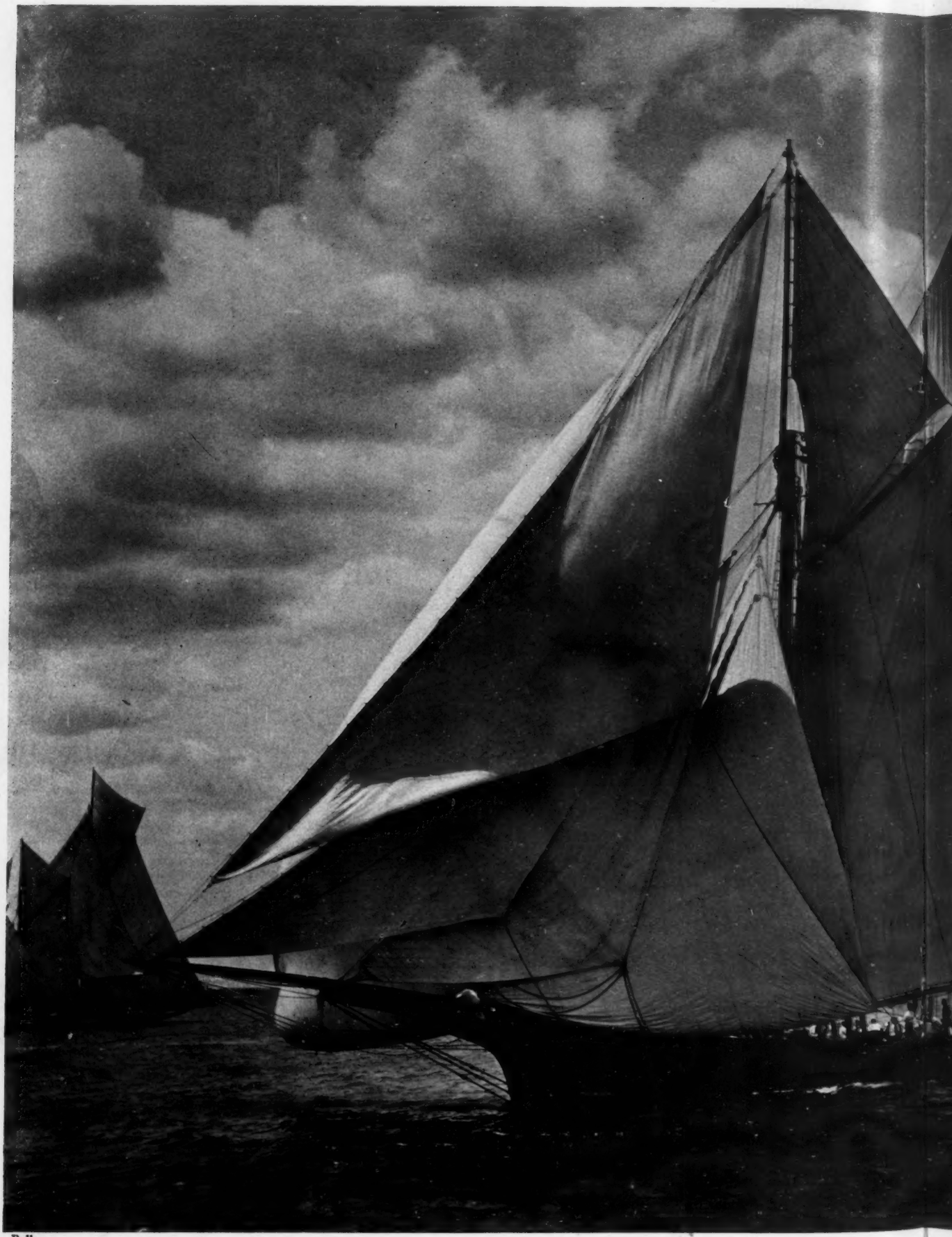
(Continued on page 74)



She is shown heeled over on the blocks, and the drawing gives a good idea of the peg top section and clean run of the famous old schooner

© Bolles

Mineola was one of the 70-footers, the largest one design class of yachts ever built. They were wonderfully fast and their owners had a season or two of keen racing, but the boats were lacking in structural strength for hard sail carrying. However, one of them, Virginia, is to-day a trading schooner jogging along from St. Thomas to Porto Rico and other island ports of the West Indies



Bolles

Dauntless, one of the old time crack schooners, was built at Mystic Bridge, Conn., in 866. feet 6 inches draught and 240 tons measurement. James Gordon Bennett bought he in 18 just nosed her out in a race across the Atlantic, though Dauntless later defeated both Cambria bad shape, she raced the new schooner Coronet from Bay Ridge, N. Y., to Queenstown. Co Dauntless took 16 days, 1 hour, 43 minutes for the 2,900 miles—a record that few sailin craft against much newer craft. She w

n., in 1866. She was originally named L'Hirondelle and was 107 feet long, 26 feet beam, 12
ht he in 1869 and lengthened her 9 feet. In 1870, the America's cup challenger Cambria
oth Cambria and Livonia in match races. In March, 1886, though, 20 years old and in very
nstown Coronet, a larger vessel, made the run in a little less than 15 days while the old
sailin craft have bettered. In 1892 she won a squadron run on the N. Y. Y. C. cruise, sailing
raft. She was a grand old boat!

Bolles

At first the contests between Canada and the United States for the Seawanhaka Cup brought out some sensible little yachts, but the measurement rule had loopholes and a vicious type of boat resulted. Wide, flat slabs like this one were built, each one more of a racing machine than her predecessor. Their construction was extremely light, they were useless for anything but racing, they were very short lived—but they were fast, and they drove out the sensible boats until the measurement rules were changed

Bolles

A start of Class R boats fifteen years ago. As is often the case, R boats have grown since then

Some Random Thoughts on Racing Classes

By WILLIAM ATKIN

LOOK back and see what has happened in the various sailing classes, not only of Long Island Sound, but of New York Bay and the Down East sailing grounds as well.

First in importance of yesterday's craft stands out the sandbagger. Here was a boat which offered everything in the line of sailing except comfort and safety. It was not unusual for one of these glorified Shrewsbury River cat boats—that's what they were, with a bowsprit and jib added—to measure 60 feet from the tip of her boom to the end of her bowsprit and this on an over all length of 22 feet and a beam of 11 to 12 feet.

Men who sailed craft like *Shadow*, one of the famous New York sandbaggers, needed little in the way of exercise beyond the handling of one of these boats. Each boat required a crew of a dozen or more very agile men, and husky ones, too, to shift ballast—the only thing which kept these craft on their feet.

"Ready about, hard-a-lee!" meant to the sandbagger something more than a graceful luff, flapping sails and another tack. It meant shift the ballast! And, as this was in the form of 50 pound bags of sand—and a pile of them—the crew well earned its keep.

The sandbagger passed, I think, because it was all racing machine and little real boat, though many of them, with smaller rigs, served in the oyster fleet for years.

Although the sandbaggers were not all built to one model and of one rig and therefore cannot be described as a one design class, still they showed the advantage of sailing boats of practically similar dimensions against one another.

Despite all the carefully devised rules formulated by the keenest racing committees, some sailorman always has and always will come along and build a boat which will beat the rules. This "beating the rule" is always the death knell to the class it is applied to. Rule beaters are usually freaks and undesirable craft.

Speaking of freaks reminds me of one of the small yachts which was built as a contender in the trials for the selection of a boat to defend the Seawanhaka Cup against the Canadians; I think this was the race of 1895. The yacht, or freak, was *Niagara*, a double centerboard craft designed and built by a Long Island yachtsman whose name I've forgotten. *Niagara* was square ended, square sided and as flat as a pancake. She was heralded as a world beater and, indeed, was fast on a reach in smooth water. But that was all. Her owner, when asked where she stood in order of winning, said one word: "Last." Nevertheless from this type came the inland lake scows and the world famous Burgess-designed *Outlook* which, on a water line of 21 feet, carried 1800 square feet of sail.

The yachts which were built year after year for the defence and challenge of the Seawanhaka Cup ranged from the able little half-rater *Ethelwynn*, designed by W. P. Stephens in 1895, to the double hulled Duggan-designed *Dominion*. She was a boat which set all precedent aside, lived up to the racing rules, yet sailed around each of them, kept the cup in Canada and made it imperative that the rules be modified, to discourage the building of advanced *Dominions*. As the perfect rule has not been evolved neither has the perfect racing class or racing yacht.

One could cite class after class that has come and gone during the past thirty years, and not wonder much why they have gone; leastways, not after a look at the later boats which were developed in any one of the classes.

All racing rules are drawn up with the one idea of giving each boat an equal chance to win. Thus all the vital elements that make for speed are penalized to some extent.

From the above, then, the deduction is quickly made that all the boats of any one class should be built to one size, one model, one sail area, one weight—in other words, identical in every detail. Then the boat element is equal and all that enters into the winning of a race is the skill of the skipper. But the boats do not improve, there is no progress made in design.

With this view in mind there have sprung up wherever yachtsmen live various one design classes, ranging in size from the 16-foot sailing dory to the 70-footers *Mineola II*, *Rainbow*, *Virginia* and *Yankee*. These yachts were of semi-fin keel type and had excessive overhangs. On 70 feet water line length they had an over all length of 106 feet, a beam of 19 feet 5 inches and a draught of 15 feet.

Because of too light construction, the boats of this largest of all one design class were not entirely satisfactory. Though persistently raced through their first season, despite endless ailments and though rebuilt in the following winter, a second season of racing saw the end of the class.

In 1902, *Neola* and *Weetamoe*, both Gardner-designed boats, were built as the nucleus of a 60-foot water line one design class, but this class lacked the support of yachtsmen just as did the 70-footers, probably as in the former instance, because the boats

Bolles

The old sandbaggers spread an enormous expanse of canvas and travelled very fast in smooth water. Racing on them was an exciting—and back breaking—sport. Shifting 50 pound bags is no joke

themselves were imperfect. They were both lengthened before their second season. One must remember, too, that the cost of racing yachts of the size of these is high and that few men have the means or the time to devote to them.

W. Butler Duncan, in 1894, suggested the idea of a restricted class of racing yachts. Boats eligible for this class were restricted to an over all length of 31 feet, a waterline length of 21 feet and a sail area of not less than 500 nor more than 600 square feet. The class included both centerboard and fin keel types. As a class, these 21-footers raced but a season or two and then the boats passed to new owners. While it is true that some of these small yachts raced in the various classes about the Sound for several years, they were not of the type which live.

The first successful one design class, and one which sailed together year after year, was that started in Newport in 1896. Herreshoff was the designer of these boats which, by the way, were fitted with bronze plate fins and lead bulbs. Twenty yachts formed the class, each being 30 feet long on the water line, 8 feet beam and 7 feet draught. They were 42 feet over all and were rigged as sloops, the jibstay leading to a short bowsprit.

Through the building of a number of yachts to one design much has been learned as to balance, rig and set of sails. Where boats are evenly matched the slightest change in any one item of rigging is apparent.

From the days when the Seawanhaka Yacht Club built its first one design class, which was of 21-foot knockabouts designed by W. B. Stearns, the vogue of these classes has increased. It may be conservatively said that every yacht club worthy of the name has fostered some kind of a racing class and these have ranged from the 70-footers of the New York Yacht Club to the open dory, the latter a familiar sight to all of us.

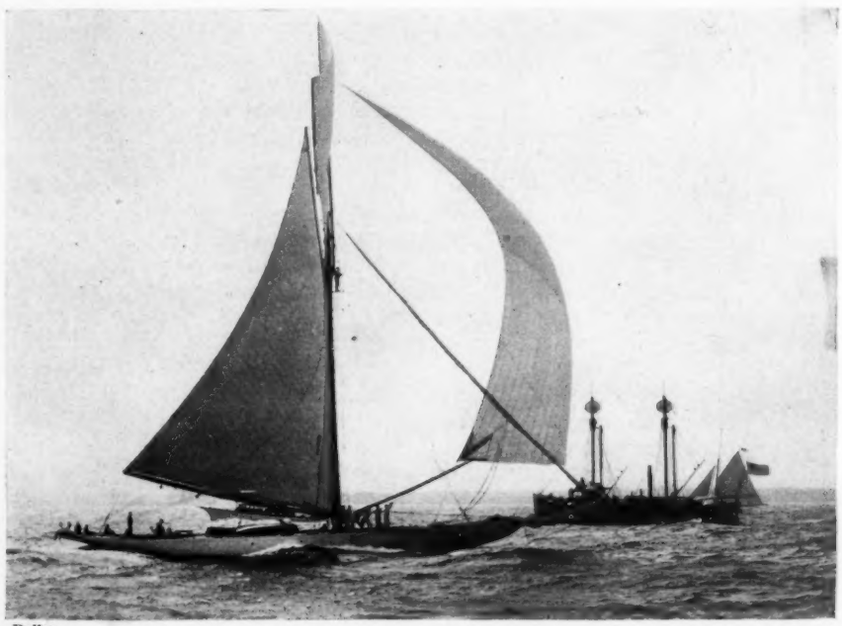
Standing out as more successful than any other class ever built for one design racing are the famous New York Thirties. Here is one class of yachts which remains as popular as ever. The "why" is apparent to any one who has had the joy of handling one of them, for they are as nearly perfect under all the conditions of sailing one usually finds on Long Island Sound as a small yacht can be. Below decks they are comfortable for cruising. Add to this the fact that they are able all around boats and in a nutshell that's the answer. Not too costly to build or to maintain is a mark in favor of the Thirties. But this is not so important as the fact that, first of all, they are honest-to-goodness boats.

After all, only those things which are good last, and it matters not whether one speaks of music, automobiles, buildings or boats; it's so.

The yachts known as the New York Forties and Fifties turned out to be short lived as a class. A season or two found them scattered to the four winds.

Of all the small sailing boats that have ever been built few have found as much favor as the little Stars. Hundreds of them are raced every week-end, not only on the Sound but on the Great Lakes as well. Few one design class have provided so much sport as these little fellows.

Several years ago the Huntington Yacht Club built a fleet of 18-footers in which motors were installed. The "Dance Class," it was called, and fine little boats they were. But in just one season interest in them waned



Bolles

Mineola II was one of the famous one design class of 70-footers. There were four of them built in 1900 and they were raced hard for a couple of seasons, but they did not seem to last. They were nicknamed the "leakabouts" which may account for their loss of popularity

and there was an end to the class. The Huntington Yacht Club, through being, like a great many other yacht clubs, somewhat more of a social organization than a sailing club, had members who didn't live to sail boats. To me it has always seemed a creditable piece of work on the part of Frederick K. Lord (the Regatta Committee of the Huntington Club and the designer of the Dance Class) that he was able to instill enough interest in his clubmates even to have the class built at all.

A class designed by William Gardner for members of the Larchmont Yacht Club consists of splendid craft. I have in mind the 36-foot water line Larchmont one design boats. Not too big to be out of range of the pocketbooks of many a yachtsman, the class should become a popular one.

The season of 1920 will see the debut of a new one design class, the Victory Sloops. Unfortunately named I think, but still, as the plans show, a fine type of boat. As owners have a choice of rig, either the old fashioned gaff sail or the leg of mutton rig, some spirited racing will develop.

It is curious to see how some classes will remain popular year in and year out. Take, for instance, the sailing dinghy developed by the Genesee Dinghy Club of Rochester, New York. Here are little bits of boats, open from gunwale to gunwale and not at all what one would suppose might live as a popular type. Yet, despite their 14 feet of length, a big fleet of them races every available day, and they cruise with their owners into the bargain.

The same may be said of the Baltimore Yacht Club duck boats.

Yank, an R boat, was built in 1917 from designs by John G. Alden. Compare her with the boats on page 67 and see the development in fifteen years

I have attempted to mention only a few of the present day sailing craft. In a later issue I shall do what I have always wanted to do, gather together whatever is of value in connection with both one design and restricted classes of small yachts and lay it before the readers of YACHTING for their comment.

Rosenfeld

Joyetta and Margaret, the R boat twins designed by F. W. Goeller, Jr., were built in 1914 and took part in some splendid racing

Seawanhaka-Corinthian Elects New Officers

RALPH ELLIS is to be the commodore of the Seawanhaka-Corinthian Yacht Club for the next year. He was elected at the annual meeting of the club, held at the New York Yacht Club on January 13.

Junius S. Morgan, Jr., was chosen vice-commodore, and Paul L. Hammond rear commodore, with Henry R. Hayes re-elected secretary, Alexander M. Orr, measurer and Arthur F. Weekes, Jr., treasurer.

Others chosen were:

Trustees (class of 1923)—Franklin Remington, Albert Strauss and T. F. Humphrey.

Race Committee: Colgate Hoyt, Jr., chairman; John Clinton Work, Henry M. Curtis, secretary; William H. Appleton and H. E. Boucher.

Committee on Lines and Models: C. Sherman Hoyt, Alexander M. Orr and Jonathan M. Thompson.

Law Committee: Gherardi Davis, William A. W. Stewart and C. J. Nourse.

Committee on Navigation and Seamanship: Arthur Curtiss James, William J. Matheson and F. S. Hastings.

Europe Adopts a New Rating Rule

The old International Rule is dead and a new one is to be tried for six years

By HENRY C. AMES

AN International Conference on yacht measurement was held in London in October. The vice-presidents of the British Yacht Racing Association presided and the following nations were represented: Argentine Republic, Belgium, Denmark, Finland, Great Britain, Holland, Norway, Sweden, Spain and Switzerland. A modification of the late International Rule was adopted for eight international classes. The seven and five-meter classes were dropped and six others, two French, two Swedish and two British were included as international classes. In addition to the regular rating classes there are now the two French classes, 6.5 and 8.5 meters overall, the two Swedish classes known as the 30- and 40-square meters, the British 12-foot dinghy class and the British 18-footers.

The International classes will be: Class A (above 23 meters), 23 meters (75.4 feet), 19 meters (62.3 feet), 15 meters (49.2 feet), 12 meters (39.3 feet), 10 meters (32.8 feet), 8 meters (26.2 feet), and 6 meters (19.7 feet).

The conference adopted four so-called National Classes, namely, the 14-foot dinghy and the 21-foot, 25-foot and 30-foot restricted classes.

The new international formula differs from the old one and is as follows:

$$\frac{L+\frac{1}{4}G+2d+\sqrt{S}-F}{2.5}=\text{Rating}$$

To find an expression for the length of the boat when she is sailing at a normal angle the length, not on the LWL, but at a fixed distance above it, is measured as shown in Fig. 1. The distance is 1½ centimeters for each unit of rating (about 6 inches in a 10-meter yacht). To this length add 1½ times the difference between girth of the yacht at the bow at this place and twice her vertical height (Figure 1). Add one-third of the difference at the stern in the same way.

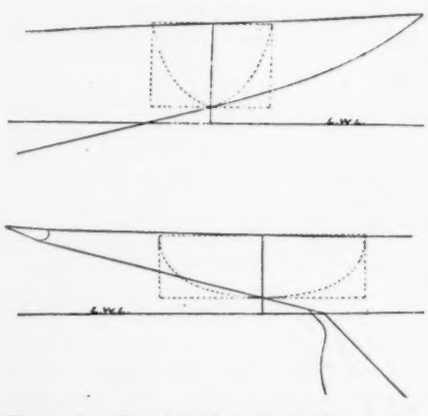


Figure 1. Showing the points of measurement for L and for the added girth difference

This gives the sailing length, *L*, in the formula.

The girth, *G*, is the chain girth, measured at a distance 0.55 from the fore end of the LWL. from covering board to covering board under the keel of the yacht. Only one-quarter of the girth is used in the formula.

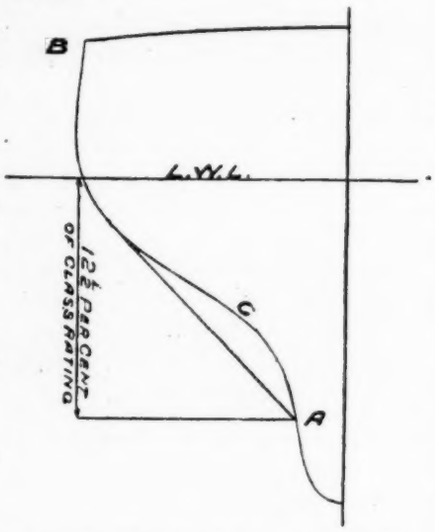


Figure 2. The skin girth is measured along the hull, B C A, and the chain girth from B to A

Fig. 2. shows how the *d*, or girth difference, is measured. Under the old rule this *d* measurement was the difference between the chain girth and the skin girth taken right round the keel of the yacht. In the New Rule the girth difference *d* is taken only above the level shown in the sketch, which is 12.5 per cent. (one-eighth) of the class rating below the LWL, leaving the designer free to model the keel as he chooses.

The freeboard is the mean of the freeboard measured at the bow, amidships and at the after end of the LWL.

The sail area in the formula is measured in the old way, that is to say, total sail area is taken, but in the New Rule only 85 per cent. of the fore triangle is measured. (The estimated effective head sail). In the New Rule the whole square root of the sail area is used in the formula; under the late International Rule only one-third of it was used.

Twenty per cent. of the L WL plus 0.5, cubed and divided by 35, is the smallest displacement a yacht is allowed, in tons. (A limit on the displacement according to the length of the boat).

In large yachts it is proposed to accept the designer's certificate of the displacement; small yachts will be weighed.

The maximum draught allowed is 16 per cent of the LWL plus 1.75.

The total height of the sail plan from the water to the top of the plan must not exceed twice the length on LWL.

No hollow is allowed in the surface of the hull between the water line and the sheer line, and the sheer of the yacht must be a fair continuous concave curve. The tumble home on each side is not to exceed 2 per cent. of the extreme beam.

All measurements are to be taken with the yacht afloat in sea water and without the crew on board. Masts must be solid spars in all classes and light wood cores to built-up masts are prohibited, but the upper part of a mast for one third of the total height (including pole or mast and topmast combined) may be hollow. Scantling rules and restrictions as to cabin fittings are in course of preparation.

The International 18-foot class is governed by a different rating formula.

$$\frac{L+\sqrt{S}}{4}+\frac{L\sqrt{S}}{3\sqrt[3]{W}}$$

Where *L* equals the length in feet, *S* the sail area in square feet and *W* the displacement in pounds.

L may be from 20 to 21 feet, *S* from 310 to 345 square feet and *W* from 3,000 to 3,500 pounds. The load water line may be 17.5 feet minimum to 18.5 feet maximum, the beam may vary from 5.5 to 6 feet and the maximum draught is 4 feet, but is not to exceed one tenth of the LWL plus 1½ times the average freeboard. There are other restrictions on forward overhang,

(Continued on page 85)

The Foam Sails for the Arctic

The first leg of a 6,000 mile voyage in an 85-ton schooner yacht

Protesilaus Stumbles on the Threshold

Glasgow, Monday, June 2, 1856.

OUR start has not been prosperous. Yesterday evening, on passing Carlisle, a telegraph message was put into my hand, announcing the fact of the *Foam* having been obliged to put into Holyhead in consequence of the sudden illness of my master. As the success of our expedition entirely depends on our getting off before the season is further advanced, you can understand how disagreeable it is to have received this check at its very outset. As yet, of course, I know nothing of the nature of the illness with which he has been seized. However, I have ordered the schooner to proceed at once to Oban, and I have sent back the Doctor to Holyhead to overhaul the sick man. It is rather early in the day for him to enter upon the exercise of his functions.

The Icelander—A Modern Sir Patrick Spens

Greenock, Tuesday, June 3, 1856.

I FOUND the Icelander awaiting my arrival here, pacing up and down the coffee room like a polar bear.

At first, he was a little shy and, not having yet had much opportunity of practising his English, it was some time before I could set him perfectly at his ease. He has something so frank and honest in his face and bearing, that I am certain he will turn out a pleasant companion. There being no hatred so intense as that which you feel towards a disagreeable shipmate, this assurance has relieved me of a great anxiety, and I already feel I shall hereafter reckon Sigurdr, (pronounced Segurthur), the son of Jonas, among the number of my best friends.

"O whar will I get a skeely skipper,
To sail this gude ship o' mine?"

Such, alas! has been the burden of my song for these last four-and-twenty hours, as I have sat in the Tontine Tower, drinking the bad port wine; for, after spending a fortune in telegraphic messages to Holyhead, it has been decided that B— cannot come on and I have been forced to rig up a Glasgow merchant skipper into a jury sailing-master.

Any such arrangement is, at the best, unsatisfactory; but to abandon the cruise is the only alternative. However, considering I had but a few hours to look about me, I have been more fortunate than might have been expected. I have had the luck to stumble on a young fellow, very highly recommended by the Captain of the Port. He returned just a fortnight ago from a trip to Australia and, having since married a wife, is naturally anxious not to lose this opportunity of going to sea again for a few months.

I start to-morrow for Oban, *via* Inverary, which I wish to show to my Icelander. At Oban I join the schooner, and proceed to Stornaway, in the Hebrides; whither the undomestic Mr. Ebenezer Wyse, (a descendant, probably, of some Westland Covenanter,) is to follow me by the steamer.

Through the Sounds

Stornaway, Island of Lewis, Hebrides, June 9, 1856.

We reached these Islands of the West the day before yesterday, after a fine run from Oban.

I had intended taking Staffa and Iona on my way, but it came on so thick with heavy weather from the southwest, that to have landed on either island would have been out of the question. So we bore up under Mull at one in the morning, tore through the Sound at daylight, rounded Ardnamurchan under a double-reefed mainsail at two P. M., and shot into the Sound of Skye the same evening, leaving the hills of Moidart (one of whose "*seven men*" was an ancestor of your own), and the jaws of the hospitable Loch Hourn, reddening in the stormy sunset.

At Kylakin we were obliged to bring up for the night; but getting under weigh again at daylight, we took a fair wind with us along the east coast of Skye, passed Raasa and Rona, and so across the Minch to Stornaway.

Stornaway is a little fishing town, with a beautiful harbour, from out of which was sailing, as we entered, a fleet of herring boats, their brown sails gleaming like gold against the dark angry water, as they fluttered out to sea, unmindful of the leaden clouds banked up along the west and all the symptoms of an approaching gale. The next morning it was upon us; but, brought up as we were under the lee of a high rock, the tempest tore harmlessly over our heads and left us at liberty to make the final preparations for departure.

Fitz, whose talents for discerning where the vegetables, fowls and pretty ladies of a place were to be found, I had already had occasion to admire, went ashore to forage; while I remained on board to superintend the fixing of our sacred figure head—executed in bronze by Marochetti—and brought along with me by rail, still warm from the furnace.

For the performance of this solemnity, I luckily possessed a functionary equal to the occasion in the shape of the second cook. Originally a guardsman, he had beaten his sword into a chisel and become carpenter; subsequently, conceiving a passion for the sea, he turned his attention to the mysteries of the kitchen and now sails with me in the alternate exercise of his last two professions. This individual, thus happily combining the chivalry inherent in the profession of arms with the skill of the craftsman and the refinement of the artist—to whose person, moreover, a paper cap, white vestments and the sacrificial knife at his girdle gave something of a sacerdotal character—I did not consider unfit to raise the ship's guardian image to its appointed place; and after two hours' reverential handiwork, I had the satisfaction of seeing the well-known lovely face, with its golden hair, and smile that might charm all malice from the elements, beaming like a happy omen above our bows.

Shortly afterwards, Fitz came alongside, after a most successful foray among the fish-wives. He was sitting in the stern-sheets, up to his knees in vegetables, with seven elderly hens beside him and a dissipated looking cock under his arm, with regard to whose qualifications its late proprietor had volunteered the most satisfactory assurances. I am also bound to mention that protruding from his coat pocket were certain sheets of music, with the name of Alice, Louisa, written therein in a remarkably pretty hand, which led me to believe that the Doctor had not entirely confined his energies to the acquisition of hens and vegetables. The rest of the day was spent in packing away our newly-purchased stores and making the ship as tidy as circumstances would admit. I am afraid, however, many a smart yachtsman would have been scandalized at our decks, lumbered up with hen coops, sacks of coal and other necessaries, which, like the Queen of Spain's legs, not only ought never to be seen, but

must not be supposed even to exist on board a tip top craft.

By the evening, the gale, which had been blowing all day, had increased to a perfect hurricane. At nine o'clock we let got a second anchor; and I confess, as we sat comfortably round the fire in the bright cheerful little cabin and listened to the wind whistling and shrieking through the cordage, that none of us were sorry to find ourselves in port on such a night instead of tossing on the wild Atlantic—though we little knew that even then, the destroying angel was busy with the fleet of fishing boats which had put to sea so gallantly on the evening of our arrival. By morning the neck of the gale was broken and the sun shone brightly on the white rollers as they chased each other to the shore; but a Queen's ship was steaming into the bay, with sad news of ruin out to seaward, towing behind her boats—water-logged, or bottom upward—while a silent crowd of women on the quay were waiting to learn on what homes among them the bolt had fallen.

About twelve o'clock the Glasgow packet came in and a few minutes afterwards I had the honour of receiving on my quarter-deck a gentleman who seemed a cross between the German student and swell commercial gent. On his head he wore a queer kind of smoking-cap, with the peak cocked over his left ear; then came a green shooting jacket and flashy silk tartan waistcoat, set off by a gold chain, hung about in innumerable festoons, while light trousers and knotty Wellington boots completed his costume and made the wearer look as little like a seaman as need be. It appeared, nevertheless, that the individual in question was Mr. Ebenezer Wyse, my new sailing-master; so I accepted Captain C.'s strong recommendation as a set-off against the silk tartan; explained to the new comer the position he was to occupy on board, and gave orders for sailing in an hour. The multitudinous chain, moreover, so lavishly displayed, turned out to be an ornament of which Mr. Wyse might well be proud; and the following history of its acquisition reconciled me more than anything else to my master's unnautical appearance.

Some time ago there was a great demand in Australia for small river steamers, which certain Scotch companies undertook to supply. The difficulty, however, was to get such fragile tea kettles across the ocean; five started one after another in murderous succession and each came to grief before she got half-way to the equator; the sixth alone remained with which to try a last experiment; should she arrive, her price would more than compensate the pecuniary loss already sustained though it could not bring to life the hands sacrificed in the mad speculation. By this time, however, even the proverbial recklessness of the seamen of the port was daunted and the hearts of two crews had already failed them at the last moment of starting, when my friend of the chain volunteered to take the command. At the outset of his voyage everything went well. A fair wind—(her machinery was stowed away and she sailed under canvas) — carried the little craft in an incredibly short time a thousand miles to the southward of the Cape, when one day, as she was running before the gale, the man at the wheel—startled at a sea, which he thought was going to poop her—let go the helm. The vessel broached to and tons of water tumbled in on the top of the deck. As soon as the confusion of the moment had subsided, it became evident that the shock had broken some of the iron plates and that the ship was in a fair way of foundering. So frightened were the crew that, after consultation with each other, they determined to take to the boats and all hands came aft to know whether there was anything the skipper would wish to carry off with him. Comprehending the madness of attempting to reach land in open boats at a distance of a thousand miles from any shore, Wyse pretended to go into the cabin to get his compass, chronometer, etc. but, returning immediately with a revolver in each hand, swore he would shoot the first man who attempted to touch the boats. This timely exhibition of spirit saved their lives; soon after the weather moderated; by undergirding the ship with chains, St. Paul fashion, the leaks were partially stopped, the steamer reached her destination and was sold for seven thousand pounds a few days after her arrival. In token of their gratitude for the good service he had done them, the Company presented Mr. Wyse on his return with a gold watch and the chain he wears so gloriously outside the silk tartan waistcoat.

(To be continued)

Florence Goes South

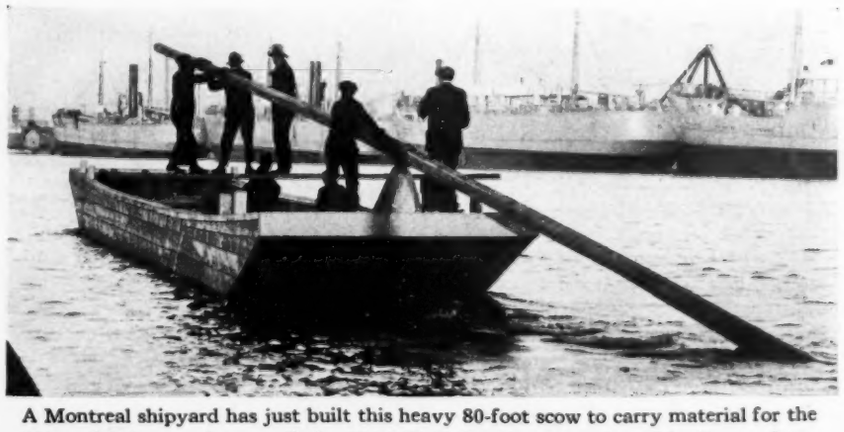
THE motor yacht *Florence*, owned by Mr. J. F. Detmer, recently sailed from New York, bound for Jacksonville, Florida. Messrs. Tams, Lemoine & Crane have chartered her to Mr. Percy Chubb of the New York Yacht Club. The *Florence* will make her headquarters at Nassau and will cruise through the British West Indies during the winter, returning here in the Spring. She was put in commission on rush orders, only a week's time having been taken to get her ready for sea.

Florence is one of the largest motor yachts in the country, being 154 feet over all and 20 feet beam. Two 250 H. P. Winton motors drive her at a speed of 14 miles per hour. She has six large staterooms, five baths, dining room, sitting room, music room, etc. She has her own electric light plant and ice machine and is thoroughly modern in every way.

Oneida Off for the Tropics

THE steam yacht *Oneida* has been chartered for an extended period by her owner, Commodore E. C. Benedict of Greenwich, Conn., to W. H. McFadden and certain associates owning large oil interests, through the firm of Cox & Stevens of New York. The *Oneida* will cruise to Central and South American countries in which the charterers have certain interests which they will explore in the course of the trip.

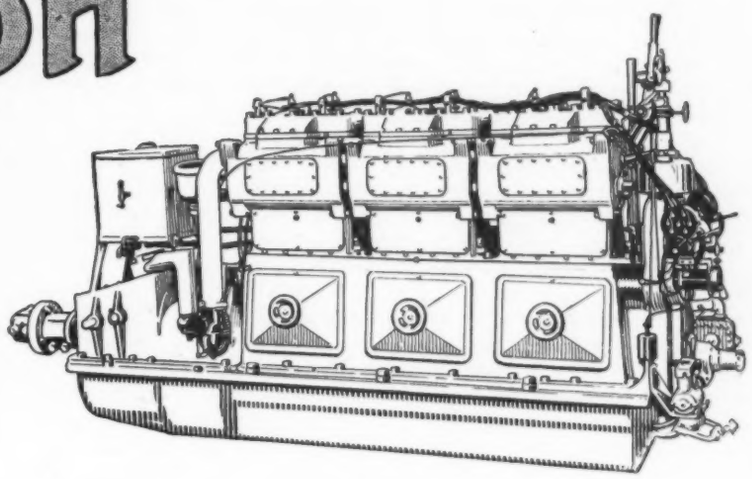
Commodore Benedict has already made several cruises to the Amazon with his yacht. Last year the vessel was converted so as to operate on fuel oil and now has a cruising radius exceeding 4,000 miles on her oil tank capacity.



A Montreal shipyard has just built this heavy 80-foot scow to carry material for the Chicoutini dam. A two cylinder 12-15 H. P. Sterling drives her 6¾ miles per hour

Winton

GASOLINE
MARINE
ENGINES



"ARE YOUR GUESTS GLAD TO GET ASHORE?"

OR, DO THEY SAY "GOOD-BYE" with keen regret that their delightful cruise with you is ended?

* * *

Which is it—on your yacht?

* * *

No owner, however courtly and genial he may be, can make his guests happy if the yacht itself isn't right.

* * *

In these high-strung, nervous days, an outing on a substantial, smooth-running yacht is wonderfully alluring. Who does not love it? But, if every moment on board means giving your nervous system the "third degree," if there is no escape from the laboring throbs of the engine, if the yacht itself vibrates incessantly, where then is the joy of either host or guests?

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Engine power need not be violent. It can be so steady, so velvety as to do its work—even its hardest work—without disturbing the most sensitive guest. That's why yachts powered with Winton gasoline marine engines are delightful.

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Early Races for the America's Cup

(Continued from page 62)

Gift as meaning a race between two boats. Much of the matter that was threshed out in those days seems odd to the yachtsman of to-day, for we have come far in sportsmanship and fair dealing. In those days "a good match was won when it was made" and men who were honest in all else were apt to look on yacht racing as a contest of wits.

The challenger objected — very properly, as we think now—to the inside course and asked for a series of races outside of Sandy Hook. This point was compromised by alternating the course between the regular club course inside and one of twenty miles to windward and return outside of the lightship.

It was May, 1871, when this state of negotiation was reached and Mr. Ashbury asked the club to waive the six months' notice and give him a race in October. This the club agreed to do. There was more ink spilled, however, for the challenger seemed to have become a good deal of a sea lawyer, but it was finally agreed to sail a series of seven races, the winner of four to take the cup.

The new challenger was named *Livonia* and was a larger boat than the *Cambria*. She was 115 feet 2 inches between perpendiculars, 23 feet 7 inches beam and drew 12 feet 6 inches. Her tonnage for racing was 264 tons.

The defending club had not yet reached the point of naming a single American contestant and chose four schooners for the defence of the cup, picking the one to sail on the morning of the race. The quartet finally selected was composed of the centerboard schooners *Palmer* and *Columbia*, both fast in light weather, and the two keel schooners *Dauntless* and *Sappho*, the latter, since her alterations, a wonderful boat in a breeze.

On the day of the first race, October 16th, the wind was light and the committee chose the *Columbia*. The race was sailed over the inside course, starting from an anchor. The light draught *Columbia* was three minutes ahead as she passed out of the Narrows (a mile and a half from the start), 15 minutes ahead when she turned the lightship and at one point was fully 40 minutes in the lead. Toward the finish she was becalmed under the Staten Island shore and the *Livonia* closed the gap a little but the *Columbia* finished nearly 25 minutes ahead, to which her time allowance added 1 minute 46 seconds more.

Two days later the second race was sailed. The start was at Sandy Hook lightship and the course was supposed to be twenty miles to leeward and return. For some reason or other the course set was fully four points off a true leeward and windward one. A moderate breeze prevailed early in the morning and the *Columbia* was again chosen, but by the time the starting gun was fired it had piped up to a cracking whole sail breeze and continued to freshen throughout the day. The committee had given no instructions as to which way the outer mark was to be turned and *Columbia's* owner, noticing this, boarded the committee boat and was informed that he could leave it on either hand in turning, a fact of which *Livonia's* crew was in ignorance.

The challenger was first across the line and with a quartering breeze she raced for the outer mark at high speed, reaching it a full two minutes ahead of the defending schooner. Now the racing rule in England was that a mark should be left on the starboard hand when not otherwise specified, so in the absence of instructions, *Livonia's* skipper felt that he must jibe around it. This, in the fresh breeze that was blowing, was not particularly easy as she had a club topsail aloft and was set well down to leeward before the sheets were flattened in for the close reach back to the lightship. When *Columbia* reached the stakeboat she naturally luffed around and nipped in between the Britisher and the mark, taking the lead. By this time the freshening wind had hardened to a moderate gale and *Columbia's* crew took her gaff topsails and foresail off her, though even then she had all she wanted. *Livonia* lugged her topsails but the Yankee schooner crossed the line 5 minutes and 16 seconds ahead, which lead her time allowance increased to 10 minutes 34 seconds.

Mr. Ashbury immediately lodged a protest against the *Columbia* on two counts: first, that by rounding the outer mark as she did she violated sailing regulations and thereby gained a decided advantage and, second, "in the interest of general match racing, and the danger of violating such regulations by the most obvious unfairness." The protest was not allowed by the committee which held that the omission to specify which way the outer mark was to be turned left the choice optional. Somewhat the same thing had happened when the *America* won the cup for she was protested for passing the wrong side of the Nab lightship. The English committee ruled that without definite instructions she had the option of passing it on either side. Mr. Ashbury also pointed out that the course was not a strict windward and leeward one and claimed that *Livonia* would have had the advantage in a hard thrash to windward.

The third race was scheduled for the following day and *Columbia* was once more selected. Her crew were not any too well pleased, as they claimed to be worn out by the strain by the two previous races, a complaint that could with equal justice have been made by the challenger's people. Gossip had it that *Columbia's* crowd had celebrated their victory freely and had been "freshening the nip" to a late hour. However, subsequent events should not be charged to or excused on such grounds.

The wind was fresh from the southwest, not at all *Columbia* weather, but the committee's choice, *Dauntless* had carried away some of its gear and *Sappho*, the other keel boat, was not on hand. *Columbia* was late getting to the line and bungled the start, *Livonia* being three minutes ahead at the Narrows. The defender, however, had almost caught the British schooner at the South West Spit but at this point *Columbia's* flying jib stay parted and she lost six minutes. She nearly held her own to the lightship, which she rounded about a mile astern of the *Livonia*, but broke her steering gear on the way back and became unmanageable. Her mainsail had to be lowered and she ran up the bay under forward canvas only, finishing 19 minutes and 33 seconds to the bad. Time allowance reduced *Livonia's* lead to 15 minutes and 10 seconds.

The fourth race was sailed on October 21 and the course was a windward and leeward one of 40 miles, starting from Sandy Hook lightship. *Sappho* was the American defender, though the wind was rather light. She crossed the line nearly two minutes ahead of the challenger and the two yachts beat slowly out toward the mark. The wind freshened and the sea began to make up and the *Sappho* finally had to douse her topsails. With her lee rail under water and her long hollow bow cutting the seas like a knife, she climbed out to windward in a wonderful style and was two miles ahead when she turned the outer mark. She would go down nearly to her hatch coamings and a dinghy that was stowed in the cockpit was washed overboard and lost. On the run back she averaged nearly twelve knots for the leg, covering the 20 miles in an hour and 42 minutes. She finished over 33 minutes in the lead.

Sappho was again chosen for the last race, over the inside course. The breeze was fresh at the start and *Livonia* carried no foretopsail and had her foretopmast housed. She was

(Continued on page 81)

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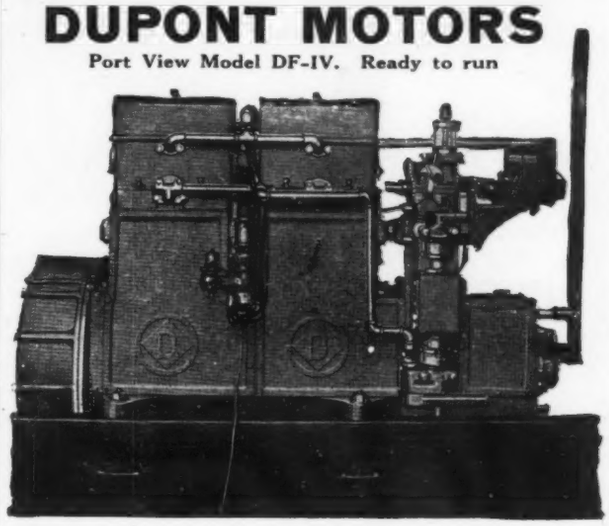

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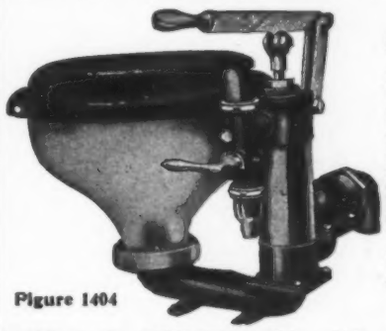

Figure 1404

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Early Races for the America's Cup

(*Continued from page 74*)

first away and in the early part of the race worked out a nice lead, but *Sappho* caught her and ran through her lee before the lightship was reached. In the beat back to the Spit buoy the defender opened up a lead of 24 minutes and gained 2½ minutes more on the run home.

This race officially ended the series, the American yachts having won four races out of the seven as specified in the agreement. Mr. Ashbury, however, had other views and claimed a continuation of the series on these grounds: that his protest against *Columbia* in the second race should be allowed (he had already notified the committee that he sailed the third race without prejudice to that protest) the third race he had won, and this made two, and if he won the sixth and seventh he would claim the cup.

In his letter he goes on as follows: "The *Livonia* will be at her station to-morrow for race No. 6, if the committee decides to entertain my claim. If not, I hereby give notice that I shall sail twenty miles to windward and back, or to leeward, as the case may be, and as already requested I notify you to send a member of the club on board to see that the rules of the club are complied with. If no competing yacht is at the station, the *Livonia* will sail over the course, as also on Wednesday, the 25th, at the same time."

The Club's committee merely acknowledged the receipt of this ridiculous claim but made no other reply. The next day a private match between the *Livonia* and the *Dauntless* was sailed off the lightship, twenty miles to windward and return. Though the *Dauntless* was the winner, the *Livonia's* owner asserted that as this was a private match and the New York Yacht Club did not officially send a boat against him, the *Livonia's* going over the course entitled her to the sixth race. The following day also he was at the line ready to start and, as no boat appeared to meet him, he claimed that race too, though he did not even sail over the course. Claiming that he had won four races, he demanded the Cup. As Captain R. F. Coffin puts it it was: "something like the boarding house keeper's reckoning with the poor sailor: 'five dollars you had, and five you didn't have, and five I ain't going to give you; an' that makes fifteen.'"

But the New York Yacht Club naturally could not see the logic of the challenger's arguments and Mr. Ashbury went back to England very much disgruntled, charging the Club with unfair and unsportsmanlike actions, criticising its racing rules and time allowance tables and threatening to bring his lawyer with him and take the decision to the courts if he ever came again. The whole series stirred up a great deal of bad feeling between the two countries. We were tired of Mr. Ashbury and his letters and protests and, after he had gone, the New York Yacht Club returned to him three cups which he had presented to it the year before. The Club came in for some severe criticism from across the Atlantic, criticism which the facts certainly did not warrant. It had conceded many points to the challenger and had shown him much consideration in a trying controversy over petty details. Though the odds were still largely in our favor and the terms not altogether what we would to-day consider fair and sportsmanlike, they were a decided advance over the conditions of 1870 and Mr. Ashbury had accepted them before starting. He was a bad loser. The feeling stirred up over the race was enough to keep any other English yachtsman from challenging for fourteen years.

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Galleys of the Sixteenth Century

(Continued from page 52)

Christian vessels issue from the Bay of Navarino than Uluch Ali recalled his galleys and succeeded in placing all but one in safety before the Romans and Neapolitans, under Colonna, could overtake them. The one cut off was a remarkably fine vessel, heavily armed and strongly manned, and commanded by Hamet, a nephew of Barbarossa and son-in-law of the redoubtable Dragut. It seems doubtful whether Hamet retired with intentional slowness, as if daring his pursuers to attack him, or whether his Christian slaves purposely slackened their speed. The race between the Christian leaders for the honor of making the prize was won by steady Santa Cruz, who ran his flagship alongside the enemy and, after a severe struggle, in which the Janissaries fought desperately, compelled a surrender. During the action Hamet was slain by one of his own Christian oarsmen who revenged, by a fortunate blow, the cruelties under which he and his fellow slaves had long groaned. Falling among the rowers' benches, the body was almost instantly torn to pieces by the slaves who, being closely chained, fell upon it with their teeth like a pack of hounds. Deprived of her commander, the galley soon struck her flag. By this capture Santa Cruz freed two hundred and twenty Christian slaves, gained a rich booty and reenforced the navy of Naples by a magnificent vessel, thenceforward known as the *Prize Galley*.

The well-known case of the Armada galleys shows still more the dangers of the slave gang when opportunity offered to turn upon their masters.

The fearful episode of the passage of the great fleet across the Bay of Biscay is here related from the pages of a great American historian.

The great fleet was very unwieldy and contained many dull sailers so that, making its way at an average rate of only about thirteen miles a day, it passed the Berlingas, literally crept by Figuera, Oporto and Vigo and at last lay becalmed off Spanish Finisterre. Up to this time the winds, though baffling, had been moderate with pleasant weather and a glassy sea. But after fanning into the Bay of Biscay the fleet was assailed by a tempest which might be considered fearful, even in that great funnel. Blowing fitfully at first and in heavy squalls, by nightfall it settled down into a gale from westnorthwest, driving before it a tremendous Atlantic sea, the surges of which broke with a roar which was distinctly

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heard above the roaring of the wind. Yet, although the sea ran high, it was not really irregular and dangerous and the unwieldy vessels, under short canvas, were making good weather of it. About midnight, the wind shifted suddenly to northeast, blowing with hurricane force and taking every ship under square sails flat aback.

Some of them, gathering sternboard, lost their rudders (much more insecurely fastened in those days than now); some were thrown upon their beam ends and forced to cut away their masts and throw overboard their guns. All lost sails and tophamper, including the upper poopcabins, at that time so lofty.

When the day broke the spectacle was presented of a whole fleet helpless and adrift upon the ocean. Many of the largest and finest vessels were lying in the trough of the sea, which every now and then made a clean breach over them and each time carried off some of the crews.

Among the fleet was a huge Portuguese galley, the *Diana*, which had been knocked down by the shift of wind, lost her masts and oars and was lying on her side, gradually filling and fast settling by the stern. The rest of the fleet were powerless to assist her and she soon sank before their eyes with every soul belonging to her, including, of course, the galley slaves chained to her benches.

Then to the horrors of storm and shipwreck were added those of mutiny, which broke out on board the galley *Vasana*. She had a motley crew of Turkish and Moorish prisoners and Christian felons who had long been watching for an opportunity to secure their freedom. Now, finding their galley to windward of the whole Armada—with the exception of the *Capitana* galley which was a mile to windward of them—these desperate creatures judged the occasion a fit one for the accomplishment of their purpose.

Led by a Welshman named David Gwynne they broke their chains and attacked the sailors and soldiers like wolves. Being superior in numbers, and the free men unable to seize their arms and overcome by the perils and labors of the night, the slaves attacked them with stilettos and other weapons, made and concealed for just such an occasion. They easily prevailed. The officers of the *Capitana*, seeing that something was wrong on board the *Vasana*, ran down as close to her as the heavy sea would permit and, finding her already in possession of the Welshman and his gang of desperadoes, poured a broadside into her which cut her up terribly and added more dead and wounded to those already on her decks.

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At this critical moment, in the midst of the still raging storm and while engaged with an enemy in the most desperate shape, the officers and crew of the *Capitana* found themselves engaged with a fearful danger within. Their own slaves rose, broke their chains and took a part in the hellish scene. No writer asserts that they had any previous knowledge of any intended rising on board the *Vasana* or whether their act was the effect of example. At any rate, they rushed upon their late masters and oppressors with such weapons as they had concealed or as they could seize on the spur of the moment, and attacked with desperate fury and resolution. There was little hope of life anyhow and none at all if their revolt did not succeed. The struggle in the midst of the gale was furious but brief and ended in the triumph of the galley slaves and they, like those of the *Vasana*, spared no rank nor age. The massacre was soon over and every corpse thrown into the raging waters. What a subject for a marine painter!

The bodies were scarcely disposed of when the summer gale suddenly abated and the two galleys were run into Bayonne by the successful mutineers where, Motley says, Gwynne was graciously received by Henry of Navarre.

Sims, the Fighting Sailor

(Continued from page 49)

"Nothing of the kind," returned the lieutenant, "that may be true in small quantities, but a barrel of oil will sink," and he ended by giving a positive order that the barrels be buoyed.

Half an hour or so later the officer of the deck strolled forward again and found, to his horror, that his order had been disobeyed. He called the offending midshipman and started to "ride him down like the main tack," but Sims, with an air of injured innocence, showed his superior that each barrel was properly buoyed according to regulations, though the buoy was a toothpick and the buoy rope cotton thread. He was reported to the captain, but the "Old Man" happened to have a sense of humor and Sims escaped with a reprimand.

N. Y. Y. C. Elects Officers

THE annual election of the New York Yacht Club resulted as follows: J. P. Morgan was re-elected Commodore; Harold S. Vanderbilt, Vice-Commodore; George Nichols, Rear Commodore; G. A. Cormack remains as Secretary; Tarrant Putnam, Treasurer and Harold W. Webb, Measurer. The committees stand as they were last year.

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Europe Adopts a New Rating Rule

(*Continued from page 70*)

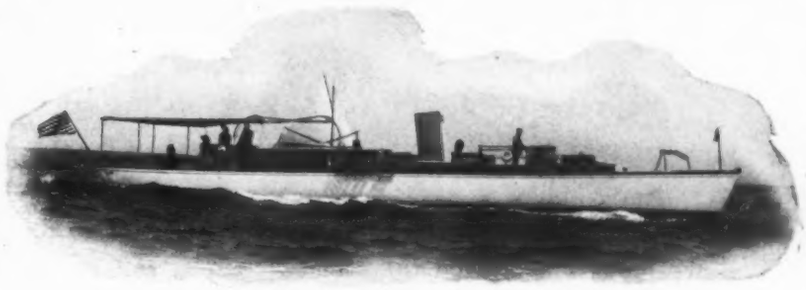
tumble home, hollow lines, and cockpit area. Not more than 75 per cent. of the sail area may be abaft the mast. Plate and bulb fins are prohibited and crews are limited to three persons. The scantlings prescribed seem reasonably light.

The two French classes are limited in over all length and overhangs, sail area, displacement and freeboard are all restricted. The scantlings seem light.

The two Swedish classes are interesting. Aside from scantling restrictions, boats for these classes are limited only to a maximum sail area and a minimum displacement. One class, the 30-square meter, may have 323 square feet of sail and not less than 4,840 pounds displacement. The 40-square meter class may have 430 square feet of sail on the same displacement.

Freak designs and unhealthy tendencies may appear, so the coefficients used in the formula of the rating rule may be varied or reviewed every two years, although the rule is to stand for six years from January 1,1920.

No delegates from the United States attended the conference. We understand that some of the officers of the Y. R. A. visited this country in search of information as to the workings of our rating rule. In fact, the editor of the British *Yachting Monthly* comments on the conference saying that the vice-president and secretary of the Y. R. A. "seemed to hold a brief for the American rule, pushing it for all they were worth. Had we no boats left in this country, and had Scandinavia no boats, we might have considered the American rule, with amendments, but as Mr. Benzon pointedly remarked, Scandinavia had boats, and America had not even sent a representative. The new rule may produce good boats, and it certainly will bring us back nearer to our old rules, which were more satisfactory than the last. . . . Further, what reason was there for pushing the American rule so zealously?" To this we can only reply that our present rating rule has worked well for a number of years, is producing a reasonable type of boat and we are pretty well pleased with it, thank you. Meanwhile we sympathize with our British cousins—or should we say brothers—in their troubles. During the war a great many British yachts were sold abroad, mainly to Scandinavia, and it will be some time before racing can be properly built up under the new rule. It will be interesting to observe its working.



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